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Adult Gambling and Problem Gambling in Alberta, 1998

prepared by Wynne Resources Ltd.
Edmonton, Alberta
and Alberta Alcohol and Drug Abuse Commission

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Alberta Alcohol and Drug Abuse Commission
An Agency of the Government of Alberta

PREFACE

In 1994, the Alberta Alcohol and Drug Abuse Commission (AADAC) served notice that the 1994 prevalence baseline study, commissioned by Alberta Lotteries and Gaming, would be replicated within 3-5 years of the introduction of services for problem gambling in Alberta. In late 1996, AADAC contracted the Edmonton-based research firm of Wynne Resources Ltd. to conduct the study on *Adult Gambling and Problem Gambling in Alberta, 1998*.

This is the full report of the 1998 study. It is organized into two parts. Part I highlights AADAC's response to the 1998 study findings. Once the study was complete, AADAC went through an internal review process of the final report from Wynne Resources Ltd. Based on this review, Part I provides a summary of the major findings, discusses implications and makes recommendations from AADAC's perspective in terms of gambling prevention, treatment, training and research.

Part II of this full report contains the final report of the replication study prepared by Wynne Resources Ltd. This part presents the research design and methodology, research results, and conclusions and implications from the researchers' perspective.


The study's original timelines called for this report to be published in November, 1998. It has been released early in response to the high degree of public interest. The review of the study is not, however, as thorough and comprehensive as intended in analysis of implications. Further work needs to be done to deliver specific applications to programs.

Adult Gambling and Problem Gambling in Alberta, 1998

Part I, Implications and Recommendations

prepared by Alberta Alcohol and Drug Abuse Commission

June 1998



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CHAPTER 1

INTRODUCTION

A. Purpose of This Summary Report

In 1994, the Alberta Alcohol and Drug Abuse Commission (AADAC) served notice of its intention to replicate a 1994 Alberta Lotteries and Gaming (now Alberta Gaming and Liquor Commission) study on the prevalence of gambling and problem gambling among adult Albertans. The purpose in conducting this replication study was to assess changes in Alberta's gambling participation and problem gambling as part of a continuous review of AADAC's broad strategy for problem gambling.

The purpose of this report is to highlight AADAC's response to the 1998 study findings. More specifically, the purpose of this report is threefold:

1. To summarize the main findings of the 1998 study;
2. To discuss the implications of the 1998 study findings for gambling prevention, treatment, training and further research; and
3. To outline AADAC's recommendations for gambling prevention, treatment, training, and further research.

Since the 1994 study, several regulatory modifications have been made to the Alberta legal gambling infrastructure to expand access to a range of gambling products in Alberta. For example, betting limits increased in casinos and hours of operation were extended; satellite bingo was approved; and the number of VLTs available was increased from 1,767 in 1994 to 5,957 in September, 1997. In Alberta, gross gaming revenues have increased from \$2.2 billion dollars in 1993 to \$3.2 billion in 1996. In particular for VLTs, gross revenue has increased from \$835 million dollars in 1993 to \$1.8 billion dollars in 1996. Conversely, in several instances, changes were made to ameliorate the effects of problem gambling (e.g., the number of VLTs was capped at 6,000 instead of 8,000; the Alberta Gaming and Liquor Commission (AGLC) limited some lottery product advertising; and AADAC was given the mandate and funding to establish and operate prevention, treatment, training and research initiatives for problem gambling). In addition to the current study, the results of the Alberta Lotteries and Gaming Summit '98 are being completed; a study on slowing down the speed of VLT play and increasing pay outs has been announced by AGLC, and program development continues in the industry, the health field and AADAC.

B. The 1994 Study

In 1994, a baseline study was conducted by Wynne Resources Limited for Alberta Lotteries and Gaming on the prevalence of gambling and problem gambling among adult Albertans. Data for the study were collected in two phases. The first phase involved a telephone survey of a representative sample of 1,803 Albertans, 18 years of age and older. The second phase consisted of in-depth field interviews with a sub-sample of 30 Albertans to add to the understanding of problem gamblers. Details of the study are documented in the report, *Gambling and Problem Gambling in Alberta* by Wynne Resources Ltd., 1994.

C. The 1998 Study

A second study was conducted in 1997/98 by Wynne Resources Ltd. for AADAC on the prevalence of adult gambling and problem gambling. The purpose of this study was to determine the current characteristics and scope of gambling and problem gambling among adults in Alberta and to compare these findings with the earlier 1994 study findings. The results serve as a basis for AADAC to enhance or modify current problem gambling initiatives and to guide further program development. The specific objectives of the study were as follows:

1. To determine the prevalence of gambling and problem gambling within the population of adult Albertans (age 18 and older);
2. To analyse and describe the characteristics and behavior of non-problem and problem gamblers;
3. To ascertain, analyse and describe non-problem and problem gamblers' use of licit and illicit substances (i.e., alcohol, tobacco, and drugs);
4. To compare 1998 research findings with results from the 1994 study; and
5. To offer conclusions and implications that may assist AADAC in prevention, education, treatment, and research initiatives designed to ameliorate problem gambling.

In September 1997, telephone interviews were conducted with 1,821 Albertans from across the province who were 18 years of age or older. This sample size was chosen to closely approximate the 1994 adult gambling survey sample (n=1,803) and estimates for both samples are accurate 19 times out of 20 ($\pm 2.3\%$). That is, with a province-wide sample of 1,821 adult Albertans, one can say with 95% certainty that the results for each survey are within $\pm 2.3\%$ of what they would have been if the entire adult population of Alberta had been interviewed. Consistent with the 1994 study, 24% of respondents were from Edmonton, 28% were from Calgary, 33% were from northern Alberta, and 15% were from southern Alberta. The questionnaire used in the telephone interviews consisted of 79 items capturing information on gambling activity, demographics, substance use, and problem gambling. As the purpose of the study was to replicate the 1994 study, the questions were designed to be comparable, with a few enhancements. In particular, some changes to the questionnaire were as follows: (1) Internet gambling was added; (2) response categories of some of the demographic questions were expanded and religion was added; and (3) questions were added on alcohol, tobacco, and drug use. For more details of the study, see Part II for the final report prepared by Wynne Resources Ltd.

CHAPTER II

MAJOR FINDINGS

As a general trend, adult Albertans are moving away from gambling and there has been a significant decline in the prevalence of problem gamblers. There is also evidence of an increase in the prevalence of probable pathological gamblers; however, this finding is not statistically significant.

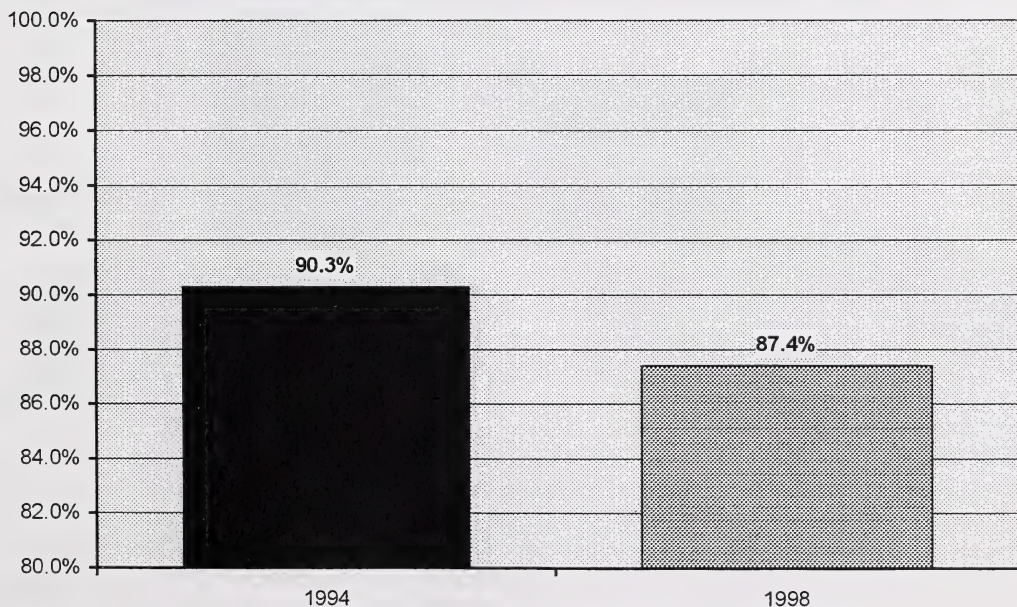
There are a cluster of findings relating to VLT use and problem gambling. These findings are correlational, not causal, in nature. While VLTs appear to be more closely connected with problem gambling than other forms of gambling, other forms of gambling are also connected. These forms of gambling are generally continuous-play in nature (e.g., slot machines, VLTs, casino games, bingo, pull-tab tickets, and instant-win/scratch tickets). The report contains data that suggest that the connection between problem gambling and continuous-play games needs to be further investigated.

A. Gambling Participation Rates

In 1998, 87.4% of adult Albertans report gambling in the past year (Part II: Table 40). As shown in Figure 1, this represents a statistically significant 2.9% decline ($p \leq .01$) in the percentage of adult Albertans participating in gambling activities since the 1994 study.

FIGURE 1

Current Gambling Participation Rates by Survey Year



Implications

Adult Albertans appear to be gambling less since 1994. There are different reasons that might account for this change. For instance, it may be that adult Albertans are less curious about gambling now, having tried it over the past few years. Moreover, people might be more aware of gambling and the potential for gambling problems and have chosen not to gamble. In part, this may be due to the work of AADAC and others, including the media, who have provided Albertans with a considerable amount of educational information about gambling and problem gambling since 1994.

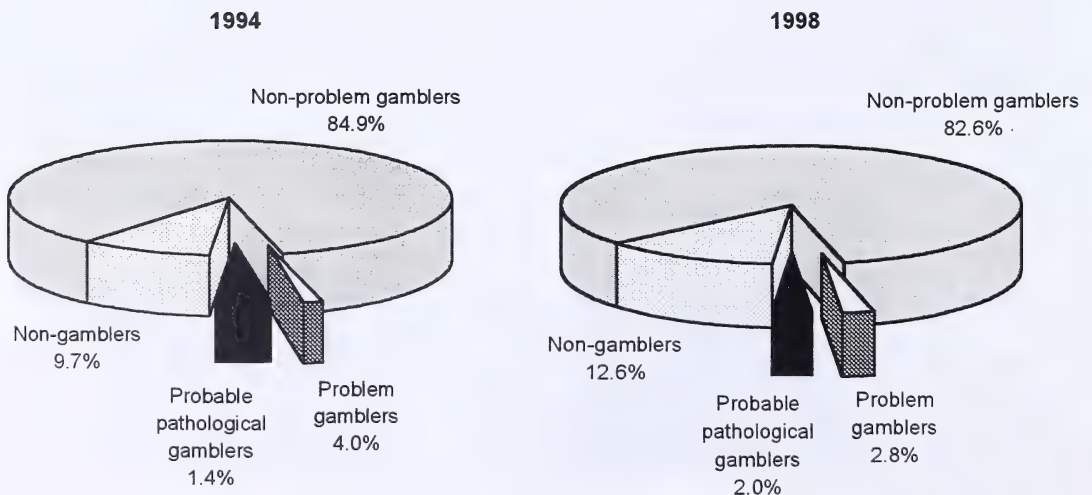
B. Problem Gambling Prevalence Rates

In both the 1994 and 1998 studies, an instrument called the revised South Oaks Gambling Screen (SOGS-R) was used to differentiate non-problem, problem, and probable pathological gamblers. Problem gamblers are the “less severe” group of adults with gambling problems, having answered “yes” to 3 or 4 items of the 20 items in the SOGS-R. Probable pathological gamblers are the “more severe” group of adults with gambling problems, having answered “yes” to 5 or more items.

As illustrated in Figure 2, for 1998, in the past 12 months most (82.6%) adult Albertans were non-problem gamblers, 12.6% were non-gamblers, and 4.8% were gamblers with less severe or more severe gambling problems (Part II: Table 6).

FIGURE 2

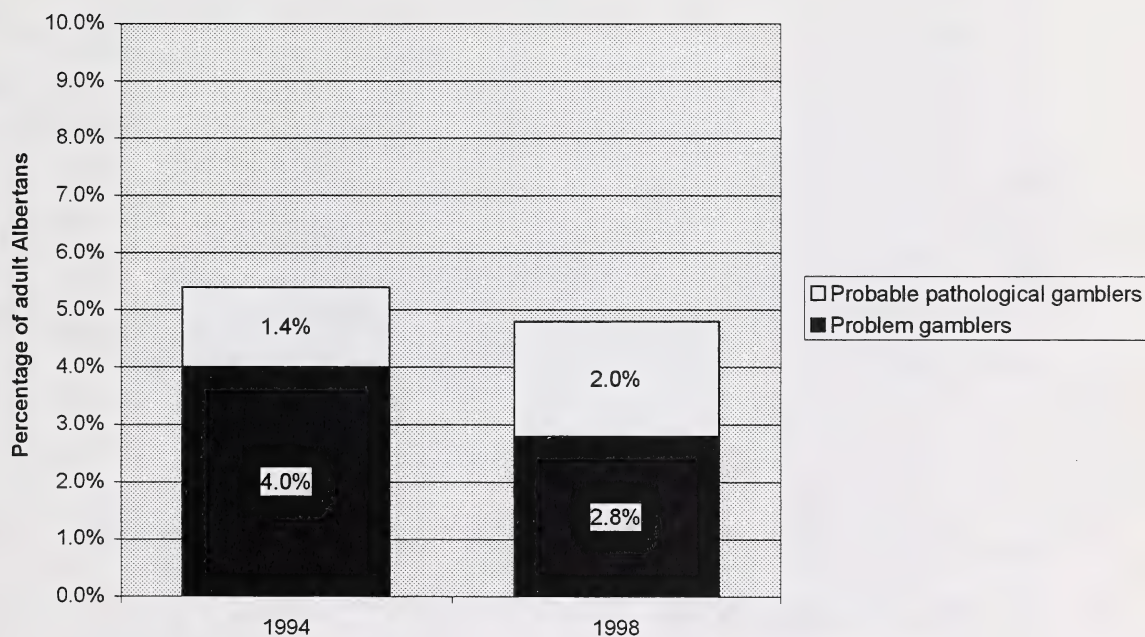
Prevalence Rates of Gamblers and Non-Gamblers by Survey Year



When compared to 1994, overall there is a decrease in 1998 in the total percentage of current problem gamblers and probable pathological gamblers combined, from 5.4% in 1994 to 4.8% in 1998 (Part II: Table 40). As shown in Figure 3, there are fewer adult Albertans in the “problem gambling” category than there were in 1994 (4.0% in 1994, 2.8% in 1998; the decrease is statistically significant at $p \leq .05$). Conversely, there are more adult Albertans in the “probable pathological gambling” category (1.4% in 1994, 2.0% in 1998). Although the increase in probable pathological gambling is not statistically significant, it is a pattern found in other replication studies.

FIGURE 3

Prevalence of Problem Gambling by Survey Year



Implications

Albertans (82.6%) enjoy participating in various forms of gambling activities without difficulties. The decrease in the percentage of gamblers with less severe problems suggests that some of these gamblers may have made choices to gamble less or to gamble in less risky ways. Conversely, a small number appear to have progressed to more serious problems. Based on the 1996 adult Alberta population of 1.9 million, it is estimated that the number of adult Albertans with less severe gambling problems has decreased from 78,770 in 1994 to 55,139 in 1998. In contrast, it is estimated that the number of adult Albertans with more severe gambling problems has increased from 27,570 in 1994 to

39,385 in 1998. These changes have taken place in a climate that has generally seen an increase in the availability of gambling opportunities.

At one end of the spectrum of gambling behavior, the decline in gambling participation and the decline in the prevalence of problem gamblers suggests that more people are able to control their gambling behavior, assume responsibility for their actions and change their behaviors. If this is the case, brief interventions and clear information on how to recognize warning signs about gambling-related problems appear to be useful strategies.

It appears, as well, that some former problem gamblers have now become probable pathological gamblers over the past four years. This increase is consistent with the view of problem gambling occurring along a continuum of varying degrees of severity. Moreover, this parallels the progression observed in alcohol and other drug addictions. Typically in substance use addictions, when the amount and frequency of substance use increases over time, users experience a decreased ability to control their use and develop more life problems. A similar progression appears to occur with gambling problems, so it is not surprising that there has been an increase in probable pathological gambling. Speculating further, the decline in numbers of the less serious problem gamblers suggests that the pool from which more serious problem gamblers are drawn is getting smaller. This may mean that with continued programming in prevention, intervention and treatment, the number of more serious probable pathological gamblers might drop over the long term. On the other hand, the research literature suggests that the increase in the number of probable pathological gamblers may be related to more liberal gambling regulations and the availability of continuous-play games. We should be cautiously optimistic about the chances to deal with the less severe levels of problems, but more cautious and conservative when we consider changes to gambling that may impact the more severe levels of problems.

C. Gambling Activities

The study asked people about the type of gambling activities they engage in and about how much they usually spend on various activities.

1. Type of Gambling Activities

As shown in Figure 4, in 1998 the most frequently reported gambling activity for current Alberta gamblers is the purchase of Lotto 6/49 and other lottery products (75%), raffles or fund-raising (63%), and instant-win or scratch tickets (37%) (Part II: Table 42). Also of note is that, from 1994 to 1998, participation in gambling activities decreases significantly for every type of activity except for three:

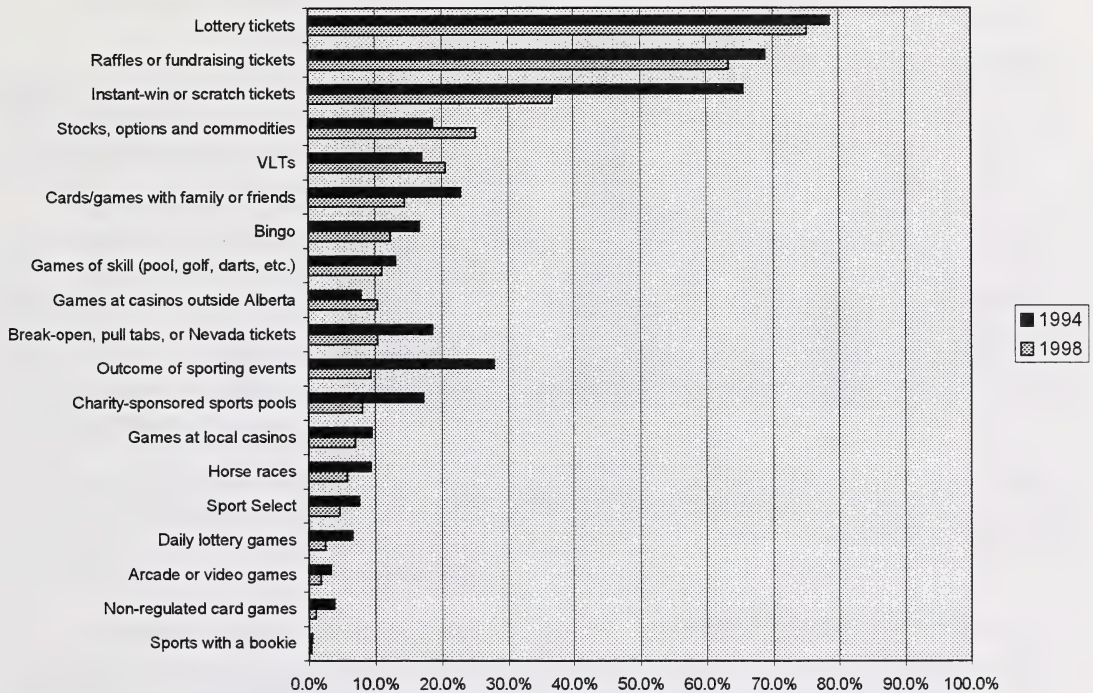
1. Gambling on stocks, options, and commodities (19% in 1994, 25% in 1998);
2. Games at casinos outside Alberta (8% in 1994, 10% in 1998); and
3. VLT play (17% in 1994, 21% in 1998).

The three gambling activities with the largest decrease in participation are (Part II: Table 42):

1. Instant-win or scratch tickets (66% in 1994, 37% in 1998);
2. Outcome of sporting events (with family or friends) (28% in 1994, 9% in 1998); and
3. Charity-sponsored sports pools (17% in 1994, 8% in 1998).

FIGURE 4

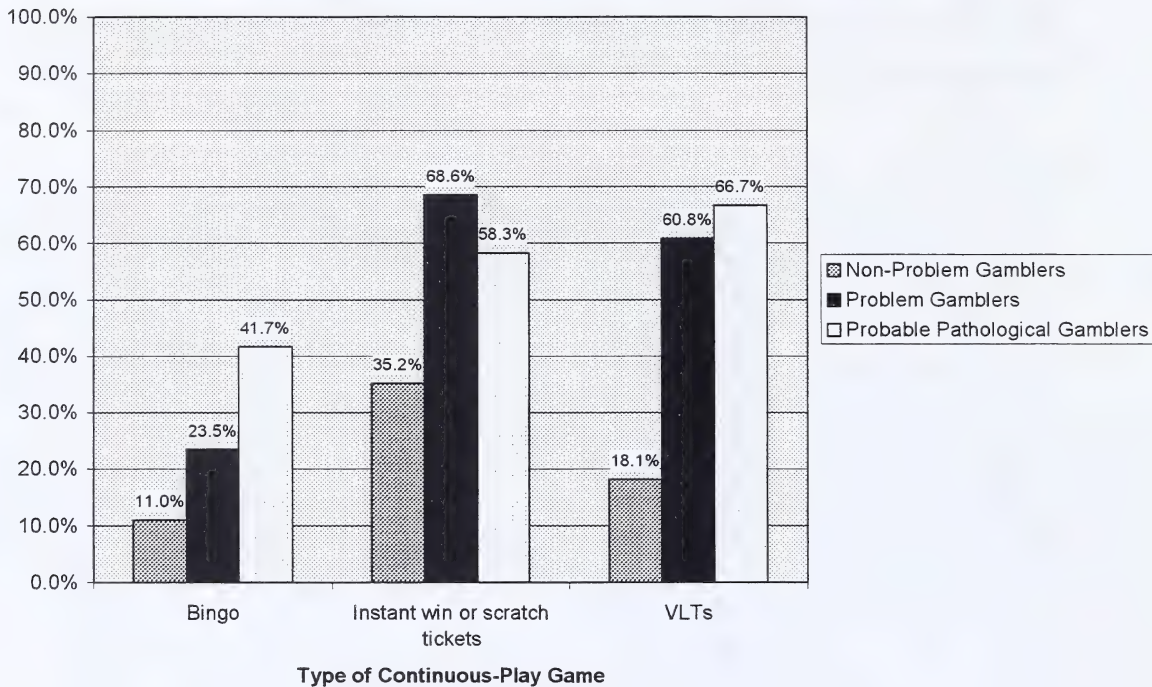
Current Gamblers' Gambling Activities by Survey Year



When looking at gambling activities for gamblers with problems, the study shows that gamblers with problems are more likely to engage in almost all forms of gambling asked about; and in particular, they are more likely to report participating in continuous-play forms of gambling. Continuous-play forms of gambling are those games that include repeated sequences of wager, play, and outcome (win or loss) within a relatively short period of time. Figure 5 shows the three most common continuous-play forms of gambling reported by gamblers with problems in the 1998 study by level of gambling problem. VLTs, instant-win or scratch tickets, and bingo are the three most common continuous-play games and clearly both problem gamblers and probable pathological gamblers participate more in these gambling activities than non-problem gamblers (Part II: Table 16).

FIGURE 5

Percentage Who Bet on Continuous-Play Games by Level of Problem Gambling



2. Expenditures on Gambling

Cash spent on gambling activities is an indication of interest and involvement in gambling¹. Both studies asked people how much money they spent on various gambling activities in a typical month. From 1994 to 1998, average monthly spending actually decreases for 13 of the 20 gambling activities asked about, which is consistent with the decrease in participation in many gambling activities (Part II: Table 44). Average monthly spending increases from 1994 to 1998 for only seven gambling activities: VLTs; games at casinos outside Alberta; games at local casinos; sports with a bookie; outcome of sporting events (i.e., with friends, family); card games in card rooms; and Sport Select. Over the same period, the number of VLTs has increased from 1,767 to 5,957; a number of changes to in-province casino regulations have increased betting limits, hours of operation and players access to funds. Similar steps to increase the attractiveness of other gambling products (horse racing, bingo and charity gambling) have also occurred where expenditures have declined.

¹ This use of expenditure information is common in the literature on problem gambling. Also, see Chapter III. Research Issues.

In the 1998 study, the average monthly spending patterns vary considerably between non-problem gamblers and probable pathological gamblers. Not surprisingly, probable pathological gamblers spend more on average each month on almost every type of gambling activity. The difference is most noticeable for wagering on VLTs: probable pathological gamblers wager \$381.50 on average each month, whereas, non-problem gamblers wager \$3.14 (Part II: Table 21).

Together, current problem and probable pathological gamblers represent 4.8% of the sample, yet they contribute 17% of the total amounts spent on gambling.

Implications

The overall decrease in gambling participation reflects continued change in the gambling scene. It is possible that disposable income has declined and that people spend less on gambling activities. Another possibility may be that public outcry over VLTs has increased awareness of the risks associated with gambling, so more people are turning away.

The increased prevalence of VLT use and the increased expenditures on VLTs among adult Alberta gamblers is, no doubt, related to the substantially increased availability of this product. The total number of VLTs in Alberta increased from 1,767 in 1992-93 to 5,957 as of September, 1997. The number of VLTs was capped at 6,000 in 1995 after initial plans called for 8,000 machines. Some of the regulatory reform related to casino play *may* have resulted in increased spending in casinos; however, the casino results are mixed (e.g., the changes in expenditure are not statistically significant, adult Albertans' participation in local casino gambling has declined while their participation in casinos outside Alberta has increased).

Study findings corroborate other research suggesting a relationship between continuous-play games and problem gambling. Continuous-play games appear to pose some risk for development or maintenance of problem gambling. Among these games, VLTs appear to be more closely related to problem gambling than other continuous-play games.

Consistent with the decrease in participation, there appears to be a decline in spending on several gambling activities; however, the gambling activities that increased in expenditures were VLTs and gambling at casinos both outside Alberta and locally. Not unlike people with alcohol problems who account for a large share of alcohol expenditures, problem gamblers and probable pathological gamblers account for more of the expenditures on gambling, in particular for continuous-play games such as VLTs. The higher expenditures on gambling likely place stress on the problem gambler's family, work, and emotional life.

D. Behavior of Gamblers

The 1998 study findings support the findings from other research, including the 1994 study that links an early gambling experience with problem gambling. For most gamblers, their first experience with gambling was playing cards or board games for money with family or friends during childhood or

adolescence. However, compared to non-problem gamblers, probable pathological gamblers were more likely to have had this experience when they were 10 years of age or younger.

The most common reason reported for gambling by all three groups of gamblers (non-problem, problem, and probable pathological) was “to win money” followed by “for entertainment or fun” (Part II: Table 25). However, non-problem gamblers were more likely to report gambling to support worthy causes. As well, most gamblers (all three groups) were more likely to report gambling with others than alone. Of note is that probable pathological gamblers were more likely to report gambling with friends or co-workers than were the other two groups of gamblers.

1. Problem Gambling Behavior

The SOGS-R was used to identify individuals with gambling problems based on their reported dysfunctional behavior. Such behavior includes: chasing gambling loses by returning to play another day; spending more time and money than planned; lying about winnings; hiding evidence of gambling from family members; missing work because of gambling; and borrowing from a variety of sources to finance gambling or to pay gambling debts.

In terms of problem gambling behavior, in the 1998 study, both groups of gamblers with problems scored highest on spending more time or money gambling than intended; going back another day to win money that was lost; and claiming to be winning when they were losing. As well, probable pathological gamblers were more likely than non-problem gamblers to have had problems with the law (although this is a relatively small percentage), and to have experienced one of five dissociative states, such as losing all track of time or feeling like another person while gambling. Although it is apparent that many probable pathological gamblers (53%) are aware that their gambling is causing them problems, few (22%) claimed they have ever wanted help to stop gambling, and fewer still (11%) have sought help (Part II: Table 30).

Comparing the SOGS-R items for both studies shows that from 1994 to 1998, significantly fewer problem gamblers spent more time or money gambling than intended; more felt guilty about gambling; fewer borrowed from their spouse or partner; and more obtained cash withdrawals on credit cards (Part II: Table 46).

Implications

Early exposure to gambling, especially for probable pathological gamblers, suggests that efforts to prevent an early gambling experience might prevent the onset of later problems with gambling. This finding is consistent with that in alcohol and drug addiction research and supports early intervention efforts and a focus on youth, especially for prevention programs. It is also interesting to note that more problem gamblers feel guilty about their gambling and fewer are borrowing from their partners. Together with the finding that few problem gamblers have sought help, it might suggest that many problem gamblers are aware that they have a gambling problem, but feel ambivalent toward getting help.

E. Alcohol, Tobacco and Drug Use

Non-problem gamblers are over 1½ times more likely than non-gamblers to be both frequent (i.e., weekly or daily) and heavy drinkers (i.e., 3 or more drinks/session). Compared to non-problem gamblers, probable pathological gamblers are about 1½ times more likely to be both frequent and heavy drinkers. As well, probable pathological gamblers are 2 times more likely than non-problem gamblers to be smokers.

Implications

This is consistent with the research literature that suggests some association between substance use problems and gambling problems. Moreover, it suggests that treatment of gamblers needs to consider the possibility of multiple addictions.

F. Profile of Probable Pathological Gamblers

When the 1998 findings for the two most divergent groups of gamblers are compared (i.e., non-problem gamblers compared to probable pathological gamblers), an interesting profile emerges of the gambler with more severe problems.

In comparison with non-problem gamblers, current probable pathological gamblers are more likely to:

- be male; be single, divorced or separated; be under 30 years of age; be Aboriginal in ethnic origin; have an annual household income under \$20,000; live with at least one other person under age 18; be Catholic; be unemployed; and have lower education.

In terms of gambling activities, probable pathological gamblers are more likely than non-problem gamblers to:

- play all types of gambling activities; play continuous-play games such as VLTs; play VLTs, local casinos and instant-win or scratch tickets on a weekly basis; spend 3 or more hours at a gambling session, have higher average monthly expenditures on VLTs and casinos; have their first gambling experience at 10 years of age or younger; play cards or board games for money with family or friends as their first experience; and gamble with friends or co-workers.

In terms of general health, compared to non-problem gamblers, probable pathological gamblers are more likely to:

- report being generally or very unhappy or dissatisfied with their lives; admit feeling anxious, worried, upset or depressed almost always or most of the time in the past 12 months; smoke daily; be heavy drinkers; have difficulties with family or friends related to their substance use; and have driven impaired.

Implications

This evidence suggests that probable pathological gamblers are characterized by a complex pattern of social, behavioral, and health concerns. What is not clear is the extent to which these patterns overlap or which ones are truly important for programming purposes. Analyses of the characteristics of the different sub-groups of gamblers is useful for identifying potential high-risk groups to target preventive and educational problem gambling awareness programs. It is also important to ensure the development of effective treatment services for problem gamblers. For example, the association between probable pathological gambling and early exposure to gambling suggests that it is important to target parents and other key people around youth in gambling prevention efforts. To identify the most pertinent risk factors, additional analyses of both the 1994 and 1998 studies are needed.

CHAPTER III

RESEARCH ISSUES

Succinctly put, this study was designed, first to determine the prevalence of gambling and problem gambling among adult Albertans and second, to compare the results to the 1994 study in order to determine what changes had occurred. Two key themes emerged in the course of AADAC's discussion of the study results, their meaning and program implications.

First, the answers provided by the study prompted new questions. The nature of the questions shifted from "what are the facts?" to "what are the connections between gambling activities, people, families and communities?" Second, in interpreting the results, staff had considerable discussion about the definition of gambling, expenditures on gambling and how to match clinical observations about problem gamblers with observations based on standardized instruments like the SOGS.

The study of gambling and problem gambling has evolved in the past four years and, in AADAC's view, needs to evolve considerably further if it is to remain a useful tool for program development and review. This section reviews the research issues and experience with one focus to improving future research and another to providing best advice on how to use the currently available information.

A. Findings Needing Further Research

From a program perspective, section "F. Profile of Probable Pathological Gamblers" raises questions of which factors listed in the profile are important and which ones help us assess the connections we need to understand. While program staff can use the profiles as a useful starting point in developing, targeting and refining programs, a lot of staff effort in sorting out which of the many factors identified are important can be reduced by identifying "risk factors." The first step in this task is to identify a useful model about gambling problems and the simplest second step is to re-analyze the existing data using, to the extent possible, the model. A third, long-term step, is to conduct new research.

Politzer and associates (1992) suggested the use of an "epidemiological model" to organize research for gambling addictions. The model was originally developed to organize health research into physical disease and has long been used in addictions and mental health research. It has also provided a helpful framework for programming (e.g., *Prevention in AADAC: A Vision for Success*). Politzer, et al.'s article provides a useful starting point for organizing problem gambling research, and should also be considered as "best advice" for program and policy development purposes. Epidemiological frameworks identify three main components:

- **agents** (e.g., bacteria, viruses, genetic code for physical disease; ethanol for alcohol addiction and gambling products for gambling addiction);
- **hosts** (i.e., the affected person's biological, psychological and social makeup); and
- **environments** (the environments that the agents and hosts share, including micro-settings like the man-machine interface on electronic and mechanical gaming devices, gambling settings, family and other social relationships and the wider network of policies and programs).

Typical epidemiological findings show that focusing on agents alone, hosts alone, or environments alone is not useful. The most useful research and program implications are found in the interaction among agents, hosts, and environments.

Risk factor analysis is used to identify elements in agents, hosts and environments that show higher or lower odds of acquiring a disease or condition. We can do two things by identifying the aspects of hosts, agents and environments that are most closely related to problem gambling. First, we can use the information to target programs to those in highest need of services. The situations, behaviors and characteristics of people identified as “at risk” are only tools for searching out those at higher risk and must be accompanied by sound assessment. Second, we can use the information to develop better research to understand how different risk factors can be moderated so that services are less likely to be needed. Some initial aspects of risk factor analysis can be conducted on the currently available data from the Wynne study.

Future research will have to be designed to establish the causal links to gambling addiction among agents, hosts and environments. Causal research is often experimental. Laboratory research such as that under way at Dalhousie University and the University of Calgary (both are examining aspects of VLT play) provide other aspects of risk research as does the Alberta Gaming and Liquor Commission’s recently-announced research into slowing the speed of VLT play. It would be highly useful if similar studies could be done with other forms of gambling as the “agent.”

The adoption of an epidemiological framework for gambling research can be a long-term matter. As a first step, AADAC supports re-analyzing the 1994 and 1998 Alberta prevalence study research within an epidemiological framework. It also encourages the work of independent researchers in this area.

Staff also had discussion about the apparent discrepancy between declining prevalence of gambling and problem gambling and the increase in Alberta Gaming and Liquor Commission (AGLC) revenue from gaming. Adult Albertans’ expenditures on gambling (Part II: Table 44) show increases or decreases for the kinds of games regulated by AGLC (Part II: page 7), but the respondents’ self-reported estimates of expenditures are very different from AGLC revenue figures. Surveys of the public about spending on alcohol and drugs typically underestimate real spending. Wynne (1998) notes a similar pattern in gambling research. It should be pointed out that both the 1994 and 1998 studies assessed a wide variety of gambling activities that do not provide revenue to the government, and that expenditure information in the study was not intended designed to compare to government revenue. The discrepancy may be of some interest and may be worthy of future research.

B. Definitions and Research Development

Clear definitions of terms are key to developing the specific questions asked on questionnaires. Specific questions, in turn, are key to collecting data that are comparable across individuals in a study and across studies, and that can be meaningfully interpreted by program staff.

AADAC staff had an internal discussion about whether “stocks, options and commodities” should be considered a form of gambling. In the 1994 and 1998 research, gambling on stocks, options and commodities was included near the end of a list of other activities that people could gamble money

on. Interviewers were told to record regular buying and selling of stock in tandem with following the stock market regularly and often acting on “hot tips” as a gambling activity, but to exclude regular contributions to RRSPs or mutual funds.

AADAC’s research staff reviewed the internal discussion with Wynne Resources, and a definition of gambling activities was incorporated in the Methodology section of Part II. Wildman (1998) notes that “gambling includes such activities as playing slot machines” but excludes “crossing the street and getting married” and that stock market and real estate speculation may occupy a “grey area” about which little is known. Peoples’ perceptions of what constitutes a “gambling activity” vary; for instance, some might consider the purchase of stocks to be a form of investment rather than gambling per se. Clearly, some observers consider some forms of “playing the market” to be gambling. The Council on Compulsive Gambling of New Jersey’s website (www.800gambler.org/stmgamb.htm) describes a pattern of stock, bond, and futures market purchasing that self-reported problem gamblers view as a form of gambling, not investment. Part of that pattern of investment is focused on the “action” in market play. In particular, “investment goals are unclear; they are in it for the feeling it gives them as they experience the highs and lows and struggles surrounding the play.” Just as clearly, most Chambers of Commerce would resist describing “playing the market” as a form of gambling.

Having raised the issue of definitional clarity with “stocks, options and commodities,” it is important to point out that a number of other useful clarifications to gambling prevalence instruments should be addressed. For instance, “gambling in casinos” includes a range of other gambling activities and a careful analysis of gambling prevalence instruments could point out other issues. The extent of activities covered also presents challenges; for example, new research (Schaefer and Aasved, 1997) describes a form of gambling among sports card collectors. From an epidemiological and addictions programming perspective, the amount of “action” in an activity is an important element of gambling (Politzer, et al., 1992) but this element has not yet been incorporated into gambling prevalence research instruments.

AADAC’s best advice on interpreting the prevalence of gambling on stocks, options and commodities is that the current research lacks a common agreement on where gambling ends and other forms of risk-taking begin, and the research community needs to address the issue. Including this particular question has a minimal effect on estimates of the prevalence of participation in gambling and no effect at all on estimates of the prevalence of problem gambling. However, longer or shorter lists of “gambling activities” are likely to result, respectively, in higher or lower rates of gambling. The broader issue raised by the discussion is that the gambling prevalence instruments currently in use are “first generation” tools. While they have served well in advancing the field, the new information we require for programming will require new tools.

A second round of discussion of the results surrounded making sense of “expenditure” information collected in the surveys. A number of researchers have used different methods to estimate the proportion of total gambling expenditures contributed by problem and probable pathological gamblers. This measure is important because it helps gauge the extent to which different types of gambling activity in different kinds of settings are attractive to problem and probable pathological gamblers. This information, in turn, is useful in setting policy and regulations. Wynne (1998), Lesieur (1997) and Grinols (cited in Lesieur, 1997) all provide estimates of the proportion that “problem gamblers” contribute to total gambling expenditures. However:

- some estimates include *gambling on stocks, options and commodities*;
- some include all “problem gamblers” (anyone with a SOGS score of 3 or more; that is, Problem Gamblers and Probable Pathological Gamblers); and
- it is unclear whether the three approaches count expenditures on the same gambling activities.

A journal article written by Blaszczynski et al., (1997) critiques the use of survey items on gambling expenditures like those used in the 1994 and 1998 studies. This article was received by AADAC on May 27, 1998, too late to be considered in Wynne’s report. The researchers provided university students with five vignettes describing different gambling expenditure patterns of a fictional person. Gambling expenditure estimates based on the vignettes varied considerably. Some students considered only the original investment, others considered the original investment minus residual holdings at the end of the session (the more accurate estimate of the direct costs of gambling to the gambler), others factored in winnings (some added winnings, some subtracted them) and so on. The financial accuracy of expenditure information gathered in this way is clearly suspect. However, this research seems to imply that very heavy gamblers underestimate their expenditures on gambling more than less heavy gamblers do. In alcohol and other drug addiction research, some under-reporting of substance use is noted and under-reporting appears to be higher among very light and very heavy users. Future studies that include expenditures on gambling should first re-develop the questions that Blaszczynski et al. find inaccurate and then test the degree to which under-reporting is related to the intensity and frequency of gambling.

CHAPTER IV

RECOMMENDATIONS

AADAC has the mandate to co-ordinate, monitor, and oversee the provision of prevention and treatment services in the area of gambling. In 1994, discussions between Alberta Lotteries and Gaming and AADAC resulted in four strategies being identified to address problem gambling in Alberta: (a) education and prevention; (b) treatment; (c) training; and (d) research. The study implications and suggested recommendations are outlined below in terms of these four strategies.

A. Recommendations for Education and Prevention

Recommendation 1: In order to ensure public awareness and understanding, AADAC should continue to develop, deliver, and enhance its general awareness and education programming on problem gambling.

Rationale: Participation in gambling activities has declined significantly since 1994. In part, this may be due to an increase in general awareness of the risks associated with gambling as a result of public attention to the issue of VLTs and due to AADAC's education and prevention efforts over the past few years. To maintain or further increase the level of awareness, it is important for AADAC to continue its education and prevention efforts. Furthermore, the results support other study findings linking early gambling experience with later development of gambling problems. This suggests that family environment is important in the early socialization of children to gamble. AADAC prevention efforts could target parents and other key influencers of youth about the risks of early exposure to gambling and focus on building resilient youth whom later become addiction-free adults.

Recommendation 2: For those at risk for developing gambling problems, AADAC should continue education and prevention initiatives that support early recognition, intervention, and referral.

Rationale: Although not statistically significant, an increase in the percentage of gamblers with more serious gambling problems is revealed in the study. To prevent gamblers from developing problems, and to prevent those who already have problems from developing more severe problems, it is important for AADAC to educate those at risk for problems as well as those in a position to recognize, intervene and refer individuals for help. For example, findings indicate that those with more severe gambling problems often gamble with friends or co-workers. In view of this, AADAC might develop prevention initiatives with staff in employee assistance programs in the workplace. As well, server intervention programs have been well received in the gaming industry in Alberta and, in the hospitality industry, they have demonstrated their effectiveness in reducing alcohol problems.

B. Recommendations for Treatment

Recommendation 3: AADAC should continue to ensure there are a range of treatment interventions available to match the level of gamblers' treatment needs.

Rationale: The study reveals that gamblers with more serious problems are aware that they have a gambling problem and may even feel guilty about their gambling, yet they are reluctant to seek treatment. Recognizing such ambivalence, AADAC should continue development of a self-directed gambling treatment strategy that is currently underway. Combined with early intervention, this may help some problem gamblers to take action at an earlier stage of problem development, thereby preventing their gambling problems from becoming more serious.

Recommendation 4: AADAC should continue to screen all clients for multiple addiction problems and ensure an integrated approach to treatment services.

Rationale: The study shows that pathological gambling is often accompanied by heavy use of alcohol, tobacco and, to a lesser extent, other drugs for some individuals. Furthermore, AADAC treatment figures indicate that, for some clients, gambling problems are sometimes not revealed until later in treatment, suggesting these clients do not recognize or disclose their gambling problems at admission. An integrated approach to treatment would help to ensure that multiple addiction problems do not go undetected. In this way, substance use and gambling would be considered at all points in the treatment process, from admission to discharge.

C. Recommendations for Training

Recommendation 5: AADAC should continue to target education and training strategies that support early recognition, intervention, and referral for those at risk for developing gambling problems.

Rationale: AADAC has played a role in assisting, educating, and training those who can intervene at the community level. Individuals at risk for, or already experiencing, problems can be readily identified, effectively supported, and appropriately referred by those in a position to recognize gambling problems in the course of their day-to-day work. Staff in gaming venues, financial institutions, human services, health care, workplace, and employee assistance programs, as well as family members, can (and already do) serve as contact points for information, intervention, and referral for those with gambling problems.

D. Recommendations for Research

Recommendation 6: AADAC recommends the adoption of an epidemiological framework for gambling research. As a first step, AADAC supports re-analysing the 1994 and 1998 Alberta prevalence study research within an epidemiological framework, and we also encourage the work of independent researchers in this area. AADAC recommends that this framework be used to guide policy and program development.

Rationale: The epidemiological framework has been widely used in health, mental health, and addictions research and programming. It has also been recommended by gambling research professionals for investigations of problem gambling. Furthermore, this replication study has highlighted some demographic, behavioral and other characteristics that may be important in identifying risk factors or high-risk groups to potentially target prevention and treatment efforts. However, these characteristics need further exploration to ensure that they are true risk factors

and not simply flags for underlying risk factors. The public and research consumers seem to expect research comparable to that found in other addictions. Because the gambling research field is young, it cannot meet these expectations without substantial support and time. The results of this report provide a descriptive overview of the findings and are a beginning in this vein.

Recommendation 7: AADAC recommends the review and refinement of the research methodology and instruments to measure problem gambling in the general population before the next prevalence study in 2002 or 2003. Because this work will take time, and policy and program decisions need to be made now, AADAC also recommends a “best advice” approach to interpreting the current gambling research.

Rationale: In the gambling research field there is inconsistency in measurement of gambling activities. In the 1998 study, this inconsistency is most obvious for the gambling activity of stocks, options, and commodities, but other gambling activities are also ambiguous. For example, wagering on games of skill, cards or board games, and outcome of sports events, are each open to interpretation as to whether or not a specific practice within the category is, in fact, “gambling.” This stems from differing or ambiguous definitions of gambling. What is needed, then, is a consensus in the gambling field on a definition of gambling which would facilitate clearer and more consistent operationalization of gambling activities for studying gambling. Related to this, many research instruments used in gambling and problem gambling research are “first generation” instruments that can be improved. In view of this, specific recommendations are as follows:

- AADAC recommends that future gambling studies should clearly define gambling and gambling activities.
- AADAC should support the recommendations made by Blaszczynski et al., (1997) on revising gambling expenditure information and recommends improved expenditure questions in any future research studies.
- AADAC should continue to support the development of a Canadian gambling prevalence instrument.

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Introductory remarks, the interpretation of study results, and the conclusions and implications offered in this report are the opinions of the researchers and, as such, do not necessarily represent the views of the Alberta Alcohol and Drug Abuse Commission, the Alberta Gaming and Liquor Commission, or individual steering committee members.

CHAPTER 1

INTRODUCTION

Studies designed to examine gambling and ascertain the prevalence rate of problem gambling in the general population are a relatively recent phenomenon. The first study of this type was conducted in the United States in 1975 by the University of Michigan's Institute for Social Research and collected data on both national and Nevada samples (Kallick, Suits, Dielman, and Hybels, 1979). Subsequently, there have been 126 problem gambling prevalence studies in North America alone, thirty per cent of which drew their respondents from the general population while the remaining seventy per cent focused on the gambling proclivities of subgroups such as adolescents, ethnic minorities, college students, substance abusers, prisoners, and so forth (Shaffer, Hall and Vander Bilt, 1997).

This spate of problem gambling prevalence studies over the past two decades can be attributed to the rapid expansion of legalized gambling and growing public concern about the perceived negative social and economic impacts of the activity. Traditionally, new legal gambling formats are justified as economic development tools that create jobs, assist charities and non-profit groups, keep taxes down, and help balance budgets (Goodman, 1995). Accompanying these economic benefits were unforeseen social costs that prompted some jurisdictions to investigate the gambling habits and behaviors of their citizens. Typically, governments authorized surveys that sought information on who gambled, why they gambled, gambling preferences, and time and amounts spent on gambling. The vast majority of these studies used the South Oaks Gambling Screen (Lesieur and Blume, 1987) to estimate the percentage of the population that had in the past or was currently experiencing difficulty controlling their urge to gamble. In some instances the findings from these surveys spurred governments into dedicating funds for treatment and prevention programs aimed at blunting the effects of problem gambling (for example, Wynne, Smith, and Volberg, 1994). Problem gambling prevalence study results are now also being used by governments as monitoring devices to assess the impact of new and expanded gambling formats.

A. Review of Canadian Problem Gambling Prevalence Studies

General population studies of adult gambling patterns have been conducted in eight Canadian provinces. In all instances randomly selected respondents were interviewed over the telephone, with the number of interviews being contingent upon available resources, population size and confidence intervals. Response rates in the Canadian studies range from 68% in Quebec to 34% in Nova Scotia, while current problem gambling rates vary from 5.4% in Alberta to 2.7% in Saskatchewan (Ladouceur, 1996). Direct comparisons between provinces cannot be made with precision because the studies were done in different time periods and with slightly different questionnaires. Also, in one case (Insight Canada Research, 1993), the SOGS score cut-off points used to classify respondents were lowered which makes meaningful comparisons invalid. Despite these methodological inconsistencies, some commonalities have emerged in the Canadian problem gambling prevalence survey findings:

- On average, 85% of adult Canadians have gambled in their lifetimes (Ladouceur, 1996).
- Problem gambling prevalence rates tend to be considerably higher in jurisdictions where gambling is readily accessible and has been available for several years, in contrast to jurisdictions with limited gambling options or where gambling formats have been recently introduced (Ladouceur, 1996).

- The profile of a Canadian problem gambler is an 18-to-34-year-old single male who started gambling at an early age, with no more than a high school education, and an annual income of less than \$30,000 (Ladouceur, 1996).

An inter-provincial task force of gambling scholars has recently been formed to develop a new instrument for estimating problem gambling prevalence rates in the general population. The expectation is that this measuring tool will be used in a first-ever, Canada-wide survey. Along with more refined assessment tools, Volberg (1996) strongly recommends that future studies be longitudinal in nature. Despite the difficulties in securing research funds for multi-year studies, Volberg contends that longitudinal studies are imperative if we are to “assess changes in gambling behavior over time, to measure the association of such behaviors with the availability of different types of legalized gambling, and to estimate the costs of gambling and problem gambling to society” (p. 126).

B. Alberta-Based Gambling Studies

Four separate problem gambling surveys have been conducted in Alberta in the past four years: *Gambling and Problem Gambling in Alberta* (Wynne, Smith, and Volberg, 1994), *Spirit of BingoLand: A Study of Problem Gambling Among Alberta Native People* (Hewitt, 1994), *Firewatch on Aboriginal Adolescent Gambling* (Hewitt and Auger, 1995), and *Adolescent Gambling and Problem Gambling in Alberta* (Wynne, Smith, and Jacobs, 1996). In brief, the main particulars in these studies are as follows:

- A province-wide study on adult Albertans’ gambling behaviors was conducted by Wynne, Smith, and Volberg on behalf of Alberta Lotteries and Gaming and published in 1994. A randomly drawn sample of 1,803 adult residents of Alberta were interviewed by telephone. With a response rate of 50% it was found that 93% of adult Albertans had gambled during their lifetimes. The South Oaks Gambling Screen was used to measure the prevalence of problem and probable pathological gambling. The current prevalence rates (over the past year) of problem and pathological gambling were estimated at 4.0% and 1.4% respectively, which meant that 5.4% of the respondents reported having difficulty controlling their gambling. A second, qualitative phase was included in the study in an effort to improve the internal validity of the telephone survey and to probe deeper into the activities and backgrounds of selected problem and pathological gamblers. According to Ladouceur (1996), this qualitative data gathering approach marked a “major improvement in the investigation of problem and pathological gambling prevalence rates (p.134).” Ladouceur also suggested that the conclusions from the phase two data be viewed with caution because of the relatively low response rates. This study was also widely imitated for its unique and comprehensive tabular data displays. Noteworthy results from this study include: (1) 93% of Albertans have gambled for money on some activity in their lifetime while 7% report having never gambled; (2) a high proportion of the sample (84%) gamble for entertainment, recreational or social reasons and have never experienced problems related to gambling; (3) based on their average monthly expenditures, the game preferences of Alberta problem and pathological gamblers were bingo, games of skill for money, casino gambling, horse racing, and VLTs; (4) a high percentage of the respondents were unaware of the true odds of winning in the games they played; and (5) the problem and pathological gambling cohort showed considerably higher alcohol, tobacco, and drug use rates than those found in the general population.

- A Nechi Institute study funded by AADAC (Hewitt, 1994) examined 156 Native Albertans who had been identified by their communities as individuals who gambled to the extent that it was cause for concern. The primary purpose of this study was to learn more about the nature and extent of problem gambling within the Alberta First Nation communities so that appropriate prevention and treatment programs could be developed. Given that this methodology led to a biased sample, it is not surprising that the current problem and pathological gambling rates as measured by SOGS were exceedingly high: 55% were identified as probable pathological gamblers, and 22% of the respondents were classified as problem gamblers. Notable findings in this study include: 65% of the respondents' households that contained children were single parent; 80% of the sample reported having relatives that had gambling problems; and a high proportion of the sample indicated they faced significant problems in other areas of their lives, for example 60% were alcohol and drug abusers, 32% said they had a serious injury or disability, and 75% claimed to have recently experienced a loss of someone close through death.
- In 1995, a companion Nechi Institute study funded by AADAC on Aboriginal adolescent gambling was published. Prepared by Hewitt and Auger, this study sought to estimate the problem gambling prevalence rate among Alberta Aboriginal youth and to examine the social, cultural, and personal factors associated with problem gambling among this cohort. Written questionnaires were completed by 961 Aboriginal students enrolled in grades 5 through 12 in 28 schools throughout the province. Using the SOGS version revised for adolescents, 28% of the respondents were deemed to be problem gamblers. The leading game preferences among this group were bingo, playing cards for money, scratch tickets, and betting on sports for money. As was the case in the adult Native study, many students in this survey had experienced the death of a friend or a family member. Forty per cent had friends die in the previous two years (10% from suicide) and nearly 70% of the sample reported having family members die in the same period (22% from accidents and 11% from suicide). Physical and sexual abuse were also common occurrences among the students; 57% said they had been struck in anger and 17% reported that someone had touched their private parts when they did not want it to happen.
- The most recent prevalence study was published in 1996 and focused on Alberta adolescents (Wynne, Smith, and Jacobs, 1996). The study collected data from 972 Alberta adolescents between the ages of 12 and 17 years via telephone interviews. Using the SOGS as modified for adolescents, 15% of the respondents were classified as being "at risk" for developing gambling problems, and 8% were identified as "problem gamblers." As was the case with the 1994 Alberta Gambling and Problem Gambling survey, the adolescent report also included data from in-depth field interviews with sub-samples of "non-problem," "at risk," and "problem gamblers." Other findings of interest include: (1) Adolescent problem gamblers were often introduced to gambling at a much younger age than were their non-gambling peers; (2) Adolescent problem gamblers were more predisposed than non-problem gamblers to spend more time and money gambling than intended, frequently "chase" their losses, and deceive family and friends about the extent and consequences of their gambling; (3) Adolescent problem gamblers were far more likely than non-problem gamblers to claim that they were unhappy--many stated that they often felt anxious, worried, upset, or depressed; and (4) Adolescent problem gamblers were more likely to be smokers, frequent and heavy alcohol users, and illicit drug takers than were their non-problem gambling counterparts.

C. SOGS Replication Studies

At present, there have been nine SOGS-based replication or follow-up studies completed in North America: four in Canada and five in the United States. A true replication study is one that samples respondents from the same population, uses the same questionnaire, includes approximately the same number of respondents, and has at least as good a response rate as the previous study. A follow-up study might have the same intent as a replication study but is lacking in one or more of the aforementioned criteria. Because the methodology is not always described in sufficient detail, it is difficult to determine precisely whether they are replications or follow-ups. It is suspected that several studies in this group of nine may be follow-ups. Figure 1 indicates where and when these studies were done:

FIGURE 1
Replication Studies

Jurisdiction	Baseline	Replication	Years Apart
South Dakota	1991	1993	2
Manitoba	1993	1995	2
British Columbia	1994	1996	2
Texas	1992	1995	3
Nova Scotia	1993	1996	3
Minnesota	1990	1994	4
New Brunswick	1992	1996	4
Iowa	1989	1995	5
New York	1986	1996	10

The primary purpose of replication studies is to identify trends in problem gambling prevalence rates over time. This data can then be used to revise prevention and treatment efforts aimed at mitigating the effects of problem gambling. Whether significant changes occur from study one to study two depends on the time between baseline and replication studies, changes in the availability and accessibility of gambling, and the number of years of experience a jurisdiction has had with legalized gambling (Volberg, 1997). In analyzing the replication studies completed in North America, it is evident that there is considerable variation between jurisdictions in terms of the number of years between studies, the amounts and types of legal gambling formats they have, and the length of time the games have been permitted. Following is a synopsis of the replication study results (we have yet to access the New York and British Columbia reports).

No significant differences were found in the lifetime or current prevalence rates of problem or probable pathological gambling between the baseline and replication studies in either South Dakota or Manitoba. In South Dakota no changes were recorded in either participation levels or problem gambling prevalence rates (Volberg and Stuefen, 1994), whereas in Manitoba the problem gambling prevalence rate declined by 0.5% and the probable pathological gambling rate went up 0.6% (Criterion Research Corporation, 1995). While this increase in Manitoba probable pathological gamblers was not statistically significant, it does signify a trend in the growth of severe gambling-related problems. The Manitoba data are difficult to interpret because the first study was never released to the public and the second study does

not indicate how gambling in Manitoba had changed in the interim. Given that both South Dakota and Manitoba were two-year replication studies, the time span may have been too limited to detect meaningful changes in prevalence rates (Baseline Market Research, 1997).

In Texas where a three-year replication study was conducted (Wallisch, 1996), the percentage of problem gamblers rose 0.5% while the percentage of probable pathological gamblers remained the same at 0.8% (these changes were not statistically significant). The main changes in gambling availability over the three years in Texas were the introduction of a state-sponsored lottery and the advent of simulcast wagering at racetracks. Nova Scotia was also the site of a three-year replication study (Baseline Market Research, 1996). In 1996, 3.9% of the Nova Scotia respondents were considered to have a gambling problem; unfortunately, no comparable data were available from the 1993 study. The only comparison given between the two studies is the lifetime problem gambling rate; in 1993 it was 4.8%, as opposed to 5.5% in 1996, however, the difference was not statistically significant. The gambling landscape in Nova Scotia had not changed markedly in the intervening three years.

A four-year replication study in Minnesota reported a statistically significant rise (1.5%) in current problem gambling but not in probable pathological gambling (+0.4%). These increased prevalence rates correspond with a rapid expansion of casino gambling in Minnesota. Moreover, respondents gambled more frequently in the replication study and their game preferences changed, in that there was a substantial increase in lottery and casino play (Emerson and Laudergeran, 1996). Another four-year replication study completed in New Brunswick (Baseline Market Research, 1997) found a 5% increase in the number of New Brunswickers who had participated in at least one gambling activity. The replication study also revealed a decline of 1.2% in the numbers of respondents identified as current problem gamblers and a rise of 0.8% in the probable pathological category (these changes were not statistically significant). The drop in the problem gambling percentage can perhaps be explained by the fact that the legal gambling infrastructure in New Brunswick remained relatively stable over the four years between studies. The increase in the probable pathological gambling cohort could be associated with the influence of VLTs. While only 4% of the sample reported playing VLTs on a weekly basis, among those who did play weekly, 35% were classified as probable pathological gamblers (Baseline Market Research, 1997).

The six-year replication study conducted in Iowa showed substantial and significant increases in both lifetime and current problem and probable pathological gambling prevalence rates; the current problem gambling rate jumped from 1.6% in 1989 to 3.5% in 1995 while the current probable pathological rate expanded from 0.1% in 1989 to 1.9% in 1995 (Volberg, 1995). This incremental growth in the numbers of respondents with gambling-related problems has been attributed to the dramatic escalation of legal gambling opportunities available in Iowa. Changes in Iowa's legal gambling offerings after the initial study include the introduction of horse racing, unlimited simulcasting, the opening of Native and riverboat casinos, the approval for slot machines to be at race tracks, and the installation of 500 instant ticket vending machines (Volberg, 1995).

In summarizing the trends from the small number of completed replication studies, Volberg (1995) concludes that increases in problem gambling prevalence rates are associated with an expansion in the availability of gambling opportunities and that an increase in gambling-related difficulties is more likely to occur in an area where there is casino gambling and especially machine gambling.

D. Changes in the Alberta Legal Gambling Scene Since 1994

Numerous modifications have been made to the Alberta legal gambling infrastructure since the 1994 gambling prevalence baseline study. Most of the changes liberalized existing regulations for the purpose of assisting the revenue generating capacities of charities, exhibition boards, horse racing associations, and the government itself. The following summary of gambling revenue reported in Alberta by AGLC for each gambling activity demonstrates the growth of these gross revenues from 1988 to 1996.

FIGURE 2
Gaming Revenue Based on Type of Activity (\$millions)

	Bingos	Casinos	Raffles	Pull Tickets	Ticket Lotteries	VLTs ¹	CGTs ²	Horse Racing
1988	\$226	\$126	\$26	\$97	\$288	-	-	-
1989	\$257	\$176	\$24	\$99	\$291	-	-	-
1990	\$277	\$192	\$25	\$107	\$315	-	-	\$211
1991	\$297	\$224	\$24	\$104	\$333	\$26	-	\$231
1992	\$329	\$243	\$26	\$99	\$365	\$151	-	\$224
1993	\$338	\$298	\$45	\$87	\$382	\$835	-	\$207
1994	\$317	\$294	\$54	\$63	\$362	\$1,498	-	\$186
1995	\$308	\$304	\$59	\$62	\$360	\$1,734	\$7	\$176
1996	\$330	\$357	\$59	\$44	\$339	\$1,816	\$121	\$152

¹VLTs = Video Lottery Terminals. VLTs were first permitted in Alberta in 1991.

²CGTs = Casino Gaming Terminals. These are slot machines and electronic horse racing games. They were first allowed in casinos in 1995.

Source: Summit '98 Alberta Lotteries and Gaming Internet website. This website provided gambling information to Albertans in support of the Government of Alberta's "gambling summit" which was held in Medicine Hat from April 23-25, 1998.

It is evident from this financial data that over the eight-year period from 1988 to 1996, the total revenue in Alberta on all forms of gambling has increased from \$763 million to \$3.2 billion dollars, or 322%. The most significant revenue change has been for VLTs, which has increased from \$26 million in 1991 to \$1.8 billion in 1996.

The major changes in the Alberta legal gambling scene in the past four years are outlined below.

Casinos

- Betting limits increased from \$200 to \$500.
- New casino games introduced: Caribbean stud and draw poker, Pai Gow, Super Pan Nine, slot machines, and “Royal Ascot” (an electronic horse racing game).
- Progressive jackpots allowed for some slot machines and Caribbean poker.
- Casino hours of operation extended by 2 hours per day and Sunday opening allowed.
- Local casinos allowed to open during the Calgary Stampede and Edmonton’s Klondike Days (previously the exhibition boards in these two cities had exclusivity on casino gambling for the duration of their summer fairs) and casinos given approval to open over the Christmas holiday season. It is now possible for an Alberta casino to be open 364 days per year.
- Liquor permitted on the casino floor.
- Banking machines and “cash call” machines allowed on the casino premises. “Cash call” machines allow patrons to draw a cheque from a credit card. This comes in handy if the player has already reached his or her daily withdrawal limit on the bank machine. There is a service charge (over 5%) for this convenience.

Horse Racing

- An increase in simulcasting from North American and Asian race tracks.
- Off-track betting allowed.
- Slot machines and “Royal Ascot” game permitted in the race track clubhouse.

Bingo

- Satellite bingos approved; at present 95 bingo halls are linked across the province to produce mega jackpots (up to \$200,000).
- “Loonie Pots” allowed; twice per bingo session a separate pool is created by the players and given as a bonus to the winner of a predetermined game.

Lottery

- New games are regularly being added and withdrawn because, other than traditional lottery games such as Lotto 6/49, most lottery products have a relatively short life-span.

- The network of lottery ticket outlets has grown from 1,750 in 1994 to 1,920 in 1998.

Video Lottery Terminals (VLTs)

- The total number of VLTs in Alberta increased from 1,767 in 1992/93 to 5,957 as of September, 1997. The number of allowable VLTs in the province was capped at 6,000 after initial plans called for 8,000 machines.
- The maximum number of VLTs under one existing license was reduced from 10 to 7 and multiple licenses on the same premises were disallowed. New licensees are only permitted to have a maximum of four VLTs.
- The provincial government has stated that if a municipality votes by a simple majority in a referendum to have VLTs removed from its jurisdiction, the request will be honored and the machines will be taken out.

Other Charity Gambling

- Maximum pull-tab prizes increased from \$200 in 1994 to \$500 in 1998.

Changes Designed to Mitigate the Incidence and Effects of Problem Gambling

- In 1994, AADAC was given a mandate and ongoing funding (in 1997/98, funding is \$2.3 million) to establish and operate prevention, treatment, training, and research initiatives.
- Following the 1994 gambling study, five major research projects have been undertaken by AADAC to examine various aspects of gambling in Alberta. These include the two studies on Native populations (Hewitt, 1994; Hewitt and Auger, 1995), an analysis of adolescent gambling behavior (Wynne, Smith, and Jacobs, 1996), a study of VLT gambling (Smoliak, 1997), and the present replication study. These studies have all been used to inform program development.
- The Alberta Gaming and Liquor Commission limited some lottery product advertising from June 1996 to August 1997.
- On March 3, 1998, Motion 505 on VLTs was introduced to the Legislative Assembly of Alberta. The Motion requests that the government act on one of the Lotteries Review Committee's recommendations. Specifically, the Motion is to reduce the speed of games on VLTs and alter other properties of VLTs to provide consumers with more accurate accounting information and better entertainment value. The intent is to lessen the negative impact of VLT play for those individuals with varying degrees of problems with gambling. Recently, in response to Motion 505, AGLC is conducting field tests on a sample of VLTs to assess the impact of increasing the payout and reducing the speed of play.

CHAPTER II

RESEARCH DESIGN

A. Purpose

The stated purpose of this study is to “determine the current characteristics and scope of gambling and problem gambling among adults in Alberta” (RFP, p. 1). Moreover, AADAC intends that this study be applied research in that the “results will serve as a basis to enhance or modify current problem gambling initiatives and to guide further program development” (AADAC *Request for Proposals*, August 27, 1996, p.1).

Based on these stated aims, the RFP Project Description, and the stated purpose of the 1994 study, the objectives of this study are as follows:

- (1) to determine the prevalence of gambling and problem gambling within the population of adult Albertans (i.e., those 18 years of age and older);
- (2) to analyse and describe the characteristics and behavior of non-problem and problem gamblers;
- (3) to ascertain, analyse and describe non-problem and problem gamblers’ use of licit and illicit substances (i.e., alcohol, tobacco, and drugs);
- (4) to compare 1998 research findings with results from the 1994 study; and
- (5) to offer conclusions and implications that may assist AADAC in prevention, education, treatment, and research initiatives designed to ameliorate problem gambling.

B. Methodology

The research design is a descriptive survey of adult Albertans’ gambling activity, gambling-related behavior, and licit/illicit substance use. A telephone survey methodology was employed to gather province-wide data which were subsequently analysed using quantitative statistical procedures.

In order to achieve the five study objectives and guide the research, the following research questions were posed:

1. What is the extent of gambling and problem gambling in Alberta within the adult population?
 - 1.1 What are the lifetime and current prevalence rates of gambling for non-problem, problem, and probable pathological gamblers?
 - 1.2 What are the demographic characteristics and gambling involvement patterns of non-problem and problem gamblers in Alberta?
 - 1.3 How does gambling and problem gambling in Alberta differ from other provinces and jurisdictions?
2. What are the social and related financial impacts of gambling on the lives of adult non-problem and problem gamblers and their significant others?

3. What are the gambling-related behavioral patterns of adult problem gamblers?
 - 3.1 What motivates problem gamblers to play?
 - 3.2 What are the attitudes of problem gamblers towards gambling?
4. What is the extent of licit and illicit substance use amongst adult non-problem and problem gamblers?
5. What are the differences, if any, in the results from the current study and those from the 1994 study?
 - 5.1 What are the inter-study differences in lifetime and current prevalence rates of gambling for non-problem, problem, and probable pathological gamblers?
 - 5.2 What are the inter-study differences in demographic characteristics and gambling involvement patterns of non-problem and problem gamblers in Alberta?
 - 5.3 What are the inter-study differences in the social and related financial impacts of gambling on the lives of adult non-problem and problem gamblers and their significant others?
 - 5.4 What are the inter-study differences in the gambling-related behavioral patterns of adult problem gamblers?

Sample. In this study, a telephone survey approach was used to interview 1,821 Albertans who were eighteen years of age or older. This sample size was chosen to closely approximate the 1994 adult gambling survey sample (n=1,803) and the margin of error for both samples is $\pm 2.3\%$ at a 95% confidence level. The 1996 Canadian census estimates the population of Albertans 18 years of age and over to be 1,969,252.

Table 1 in Appendix 1 displays how closely the survey sample represents the population of adult Albertans. The sample closely approximates the actual population for the gender and marital status demographic variables. Similarly, the sample corresponds fairly closely to the age of the population, albeit it is somewhat over-representative of adults between 25 and 44 years of age (52.3% vs. 46.5%) and under-representative of adults 65 years and older (9.2% vs. 13.6%). The sample over-represents those of British, French, and European ethnic origin and under-represents Aboriginal and Asian populations. It is likely that Statistic Canada's "mixed" ethnic origin category includes representatives from these five groups; therefore, a redistribution of census data into these five groups would likely result in a closer approximation of the sample to the population for the British, French, and European cohorts and a wider discrepancy for the Aboriginal and Asian groups. In terms of the income variable, it appears that those reporting an annual household income of \$29,999 or less are over-represented in the sample (28.8% vs. 22.1%); those with an income between \$30,000 and \$69,999 are under-represented (39.4% vs. 48.9%); and those with an income of \$70,000 or more are under-represented (19.9% vs. 28.9%). However, it is conceivable that these discrepancies would be lessened if respondents who refused to divulge their income levels are factored in. Finally, in terms of respondents' educational level, the sample is representative of those with a high school diploma (22.6% vs. 21.0%) and some type of post-secondary degree, diploma or

certificate (48.7% vs. 45%). It is not known if the sample represents those with a lower educational level (e.g., elementary or junior high school) as the footnote to Table 1 in Appendix 1 suggests. In general, it may be concluded that the survey sample is fairly representative of the Alberta population 18 years of age and older, given that the margin of error for the sample is $\pm 2.3\%$ at the 95% confidence level. The notable exceptions appear to be an under-sampling of Aboriginal and Asian cohorts and an over-sampling of those with the lowest versus highest income levels.

The sample was stratified along geographic lines as follows: 24% of the respondents were from Edmonton (n=427); 28% were from Calgary (n=517); 33% were from northern Alberta (n=597); and 15% (n=280) were from southern Alberta. As with the overall sample size, these stratification proportions are virtually identical to those in the 1994 study (i.e., 24% Edmonton; 30% Calgary; 33% northern Alberta; and 14% southern Alberta).

Telephone survey method. The Population Research Laboratory in the Sociology Department at the University of Alberta conducted the telephone survey in September 1997, using a random digit dialing procedure. The first three digits in the telephone number denote the local telephone exchange and this was used to stratify the sample along geographic lines. The final four digits were randomly generated by computer, and business, fax, and out-of-service numbers were expunged electronically.

The Population Research Laboratory employs highly trained and experienced telephone interviewers who work out of a specialized communications facility which utilizes a computer assisted telephone interviewing (CATI) system. The survey questionnaire was programmed into the CATI system and interviewers dialed respondents and entered responses directly into the computer. A pilot survey with 45 respondents was conducted in January 1997, and this feedback was used to improve the questionnaire and familiarize the telephone interviewers with the study and the instrument. As the actual survey was not conducted until nine months after the pilot, a second training session was conducted with the telephone interviewers to reacquaint them with the study and the questionnaire. To further ensure the quality of the interviews, up to 10 callbacks per respondent were made. Table 2 in Appendix 2 shows a response rate for this survey of 67%, which is considerably higher than the 50% response rate achieved in the 1994 adult gambling study.

Questionnaire. To address the research questions posed, the 79-item *Alberta Adult Gambling Survey* instrument was constructed (refer to Appendix 3 for the questionnaire). This questionnaire includes questions in the following categories: gambling activity, South Oaks Gambling Screen (SOGS), demographics, and alcohol, tobacco, and drug use. The ordering of these categories, and of the questions therein, was carefully considered to ensure the greatest probability of both completing the interview and gaining the highest quality response.

As this is a study that purports to replicate the findings of the 1994 gambling survey of adult Albertans, the questions posed in each must be comparable. To this end, questions in the above categories—except for alcohol, tobacco, and drug use, which is a new category—were matched with those in the 1994 study. In the gambling activity category, respondents were once again asked to reveal whether they had gambled (i.e., ever in their lifetime, in the past 12 months, or weekly) on the array of activities that was first included in the 1994 survey (one new activity, Internet gambling, was added and the wording of some gambling activity types was changed slightly). Subsequently, respondents were asked the following questions for each type of gambling activity: hours spent; amount spent/month; largest amount spent/one

day; co-participants; and reasons for playing. This protocol is slightly different from that used in the 1994 study, however, it is still possible to directly compare 1994 and 1998 respondents' gambling for each type of game.

Demographic variables were essentially the same in both studies, although the response categories for ethnic origin, income, education, and employment status were expanded in the 1998 questionnaire and religion was added as a new category. A new category of questions to discern respondents' alcohol, tobacco, and substance abuse was also added in the 1998 study. The structure and content of this new substance use category was based, in large measure, on a similar section included in the *Adolescent Gambling and Problem Gambling in Alberta* (Wynne et al., 1996) study undertaken by the same researchers and on expert advice obtained from AADAC professionals.

Finally, the revised South Oaks Gambling Screen (SOGS-R) (Abbott and Volberg, 1992) was utilized to determine the prevalence of non-problem, problem, and probable pathological gamblers in the adult Albertan population. The 21-item SOGS-R was included in the questionnaire, as it was in the 1994 Alberta gambling study. Table 3 in Appendix 4 shows a comparison of the wording of the SOGS-R questions in the 1994 and 1998 Alberta studies, and furthermore, Table 4 (Appendix 4) shows which items are scored in each study, what the cut-points are for each problem gambler type, and what labels are used for each cohort. An examination of these tables shows that the identical methodology has been utilized in both the 1994 and 1998 Alberta studies to identify non-problem, problem, and probable pathological gamblers.

Data analysis. During interviews, responses were directly entered into a computer at the Population Research Laboratory and, subsequently, an SPSS data file was generated. These data were statistically analysed and response frequencies for each question are displayed in this report for each of the following cohorts, where appropriate: gamblers, non-gamblers, non-problem gamblers, problem gamblers, and probable pathological gamblers.

In most of the tables that follow, percentages sum down to 100%, with variances due to rounding numbers or, in some cases, missing data (e.g., some interviewees did not offer a response). For some survey questions, respondents were allowed to offer multiple responses such as for reporting participation in more than one gambling activity; consequently in these tables, percentages will not sum down to 100%. Readers are reminded to note this when reviewing the tables in this report.

To compare the 1994 and 1998 data, SPSS files were combined to make a total of 3,624 cases. Where variables corresponded one-to-one in each study, these were compared and chi-square tests for statistical significance were conducted. In the second section of the results chapter, these comparisons are displayed in tables and statistical significance is noted.

Steering committee. The researchers have had the benefit of guidance and feedback from an inter-departmental steering committee comprised of representatives from the Alberta Alcohol and Drug Abuse Commission and the Alberta Gaming and Liquor Commission. The committee assisted in the research design, including framing the study objectives and research questions; provided feedback on various iterations of the survey questionnaire; and reviewed study results, providing insights and interpretations for the researchers' consideration.

C. Definition of Terms

Throughout this report a number of gambling-related terms are used and, in this section, definitions for these are offered.

Gambling

In his comprehensive research guide to the field of gambling studies, Wildman (1998) discusses various conceptualizations, definitions, and ingredients of “gambling.” He cites the sociologist Devereux (1968) who defined gambling as “the betting or wagering of valuables on events of uncertain outcome,” and Wildman suggests further that gambling is “a conscious, deliberate effort to stake valuables, usually but not always currency, on how some event happens to turn out” (p.1).”

Wildman states that “gambling includes such activities as playing slot machines” but excludes “crossing the street and getting married.” His point is that there is some debate as to what activities constitute gambling, and he cites as an example the “grey area” of stock market and real estate speculation which he considers to be “quasi-gambling” since what little is known about this type of gambling is largely anecdotal in nature.

Gambling Activities

In this study, gambling activities include (1) the full range of legally-sanctioned and government-regulated gambling that occurs throughout Alberta (e.g., lotteries including video lottery terminals (VLTs), raffles, pull tickets, Sport Select, bingo, charity casinos, and horse racing); (2) games at casinos outside Alberta (e.g., Las Vegas); (3) formal and informal betting for money amongst individuals on a variety of activities (e.g., sports pools and events, games of skill, cards and board games, arcade or video games, Internet gambling); and (4) purchasing speculative investments (e.g., stocks, options, or commodities).

As Wildman (1998) notes, people’s perceptions of what constitutes a “gambling activity” vary; for instance, some might consider the purchase of stocks to be a form of investment rather than gambling per se. Nevertheless, as this is a replication study, the gambling activities included are virtually identical to those incorporated in the 1994 study. The only exception is the addition in the 1998 study of Internet gambling which emerged after the 1994 research was conducted.

South Oaks Gambling Screen

The South Oaks Gambling Screen (SOGS) is a 20-item scale developed by Lesieur and Blume (1987) that differentiates non-problem, problem, and probable pathological gamblers. This screening instrument has been utilized in most of the problem gambling prevalence studies conducted in populations throughout Canada, the United States, and abroad.

LIFETIME and CURRENT Non-Problem, Problem, and Probable Pathological Gamblers

On the basis of scores on the 20-item SOGS, respondents are classified as non-problem (SOGS=0,1 or 2), problem (SOGS=3 or 4), or probable pathological gamblers (SOGS=5 or more). Furthermore, respondents are classified as “lifetime” problem or probable pathological gamblers if they

achieved this score at any time in their life. Similarly, respondents are classified as “current” problem or probable pathological gamblers if they gambled in the past 12 months and achieved the corresponding SOGS score.

Disordered Gambling

In their recent meta-analysis of problem gambling prevalence studies, Shaffer, Hall and Vander Bilt (1997, pp.8-9) discuss the variance in the use of terms such as “compulsive” gambling, “problem” gambling, “at-risk” gambling, “potential pathological” gambling, and “probable pathological” gambling to demonstrate the lack of conceptual clarity in describing the level of severity of the individual’s affliction. In an effort to provide a helpful conceptual framework, they offer the term “disordered gambling” for two main reasons: (1) the concept of disordered gambling transcends each of the existing constructs (e.g., excessive, problem, pathological, and compulsive gambling) by recognizing that each of these categories represents, at various levels of intensity, a lack of order in one of the major systems of human experience (e.g., social, psychological, or biological systems); and (2) the notion of disorder represents a continuum of experience.

In this study, as in the 1994 Alberta study, the terms “problem” and “probable pathological” gambling are used to describe the severity of respondents’ gambling disorders.

CHAPTER III

RESULTS

Results from the telephone survey are presented in this chapter. These findings describe the present characteristics of adult gamblers in Alberta, gambling activities, behavior of gamblers, and gamblers' alcohol, tobacco, and drug use. Descriptive statistics in each of these four areas are presented in the tables that follow and the most salient findings are highlighted.

A. Profile of Adult Gamblers

1. Gambling Classification

The first research question sought to determine the extent of gambling and problem gambling in Alberta within the adult population and, more specifically, the lifetime and current prevalence rates for non-problem, problem, and probable pathological gamblers. As mentioned in Chapter II, the South Oaks Gambling Screen (SOGS) is utilized in the survey to categorize non-problem, problem, and probable pathological gamblers. Moreover, respondents are further distinguished as "lifetime" versus "current" gamblers—lifetime gamblers are those who have ever in their lifetime bet on any gambling activity for money, whereas, current gamblers are those who have done so in the past 12 months.

Tables 5 and 6 show the percentage of respondents who are both lifetime and current gamblers, and furthermore, the percentage who score on the SOGS as lifetime and current non-problem, problem, and probable pathological gamblers. The following highlights from these tables are noted:

- 97.0% of adult Albertans have gambled in their lifetime and 87.4% have done so in the past 12 months.
- 5.2% of adult Albertans have had a problem with their gambling at some point during their lifetime and a further 2.7% were probable pathological gamblers at some time during their life.
- 2.8% of adult Albertans currently have a gambling problem and a further 2.0% are probable pathological gamblers at present.

TABLE 5
Prevalence of Gambling Among Adult Albertans
Who Are LIFETIME Gamblers (Have Gambled in Their Lifetime)

Survey Sample		
Sample Size	Non-Gamblers	Gamblers
n=1,821	54	1,767
100%	3.0%	97.0%

Gamblers		
Non-Problem Gamblers (SOGS=0,1,2)	Problem Gamblers (SOGS=3,4)	Probable Pathological Gamblers (SOGS=5+)
1,622	95	50
89.1%	5.2%	2.7%

* % of gamblers are based on the total sample (n=1,821)

TABLE 6
Prevalence of Gambling Among Adult Albertans
Who Are CURRENT Gamblers (Have Gambled in the Past 12 Months)

Survey Sample		
Sample Size	Non-Gamblers	Gamblers
n=1,821	229	1,592
100%	12.6%	87.4%

Gamblers		
Non-Problem Gamblers (SOGS=0,1,2)	Problem Gamblers (SOGS=3,4)	Probable Pathological Gamblers (SOGS=5+)
1,505	51	36
82.6%	2.8%	2.0%

* % of gamblers are based on the total sample (n=1,821)

2. Demographic Profile of Gamblers and Non-Gamblers

The vast majority of adult Albertans have gambled for money, and this research sought to identify the demographic characteristics of gamblers and non-gamblers, and of non-problem, problem, and probable pathological gamblers. These characteristics are displayed in Tables 7, 8, 9, 10 and 11.

The demographic characteristics (gender, age, marital status, education, ethnic origin, household income) of Albertans who have gambled—and those who have never gambled—in their lifetime are displayed in Table 7.

TABLE 7
Demographic Profile of LIFETIME Gamblers and Non-Gamblers

Demographic Variables	% Gamblers (n=1,767)	% Non-Gamblers (n=54)	Demographic Variables	% Gamblers (n=1,767)	% Non-Gamblers (n=54)
Gender			Ethnic Origin		
Male	50.0	48.1	British	40.7	29.6
Female	50.0	51.9	French	7.5	0.0
Marital Status			Western European	19.2	29.6
Single-Never Married	23.6	24.1	Eastern European	6.4	9.3
Married	55.2	64.8	Russian	5.2	1.9
Common-Law	6.3	3.7	Scandinavian	6.7	7.4
Divorced/Separated	10.2	3.7	Aboriginal	2.3	1.9
Widowed	4.4	1.9	South Asian	0.7	3.7
Age			East/Southeast Asian	2.8	5.6
18-24	12.7	22.2	Latin/Central South American	0.6	3.7
25-29	11.3	14.8	Arab	0.3	1.9
30-34	13.8	3.7	Israeli	0.1	0.0
35-39	14.4	14.8	African	0.3	0.0
40-44	13.1	9.3	Caribbean	0.5	0.0
45-49	8.6	1.9	Central/South Pacific	0.3	0.0
50-54	7.1	7.4	Other (Mixed)	2.0	1.9
55-59	5.5	3.7	Income		
60-64	4.4	5.6	Less than \$10,000	5.0	9.3
65-69	3.4	9.3	\$10,000 - \$19,999	10.9	9.3
70 or Older	5.5	7.4	\$20,000 - \$29,999	12.8	13.0
Education			\$30,000 - \$39,999	11.9	16.7
Elem or Junior High	4.4	7.4	\$40,000 - \$49,999	11.6	5.6

Demographic Variables	% Gamblers (n=1,767)	% Non-Gamblers (n=54)	Demographic Variables	% Gamblers (n=1,767)	% Non-Gamblers (n=54)
Some High School	10.8	11.1	\$50,000 - \$59,999	9.2	3.7
High School Grad	22.5	27.8	\$60,000 - \$69,999	7.0	3.7
Some College/Voc/Technical	13.7	3.7	\$70,000 - \$79,999	5.4	3.7
College/Voc/Technical Diploma	19.8	20.4	\$80,000 - \$89,999	3.5	0.0
Some University	8.3	9.3	\$90,000 - \$99,999	3.2	0.0
Undergraduate Degree	13.9	14.8	\$100,000 or over	8.0	9.3
Graduate Degree	4.1	5.6			
Professional Degree	2.5	0.0			

From the demographic data on adult Alberta lifetime gamblers and non-gamblers in Table 7, the following characteristics are noted:

- gamblers are equally likely to be male as female; non-gamblers are slightly more likely to be female (52%).
- both gamblers (62%) and non-gamblers (69%) are more likely to be married or in a common-law relationship than single; non-gamblers (65%) are more likely than gamblers (55%) to be married; gamblers (10%) are more likely than non-gamblers (4%) to be divorced or separated.
- non-gamblers (22%) are more likely than gamblers (13%) to be 24 years of age or less; non-gamblers (17%) are more likely than gamblers (9%) to be 65 years of age or older.
- the vast majority of both gamblers (85%) and non-gamblers (82%) have graduated from high school and received at least some post-secondary education or training.
- gamblers (67%) are somewhat more likely than non-gamblers (59%) to give their ethnic origin as British, French, or western European.

- more than one-half of both gamblers (52%) and non-gamblers (54%) have an annual household income of less than \$50,000; gamblers (15%) are somewhat more likely than non-gamblers (9%) to have an annual household income of \$80,000 or more.

Table 8 displays the demographic characteristics of adult Albertans who have gambled in the past 12 months compared with those who have never gambled.

TABLE 8
Demographic Profile of CURRENT Gamblers and Non-Gamblers

Demographic Variables	% Gamblers (n=1,592)	% Non-Gamblers (n=229)	Demographic Variables	% Gamblers (n=1,592)	% Non-Gamblers (n=229)
Gender			Ethnic Origin		
Male	50.3	47.6	British	40.3	40.6
Female	49.7	52.4	French	7.4	6.6
Marital Status			Western European	19.0	23.1
Single-Never Married	23.4	25.3	Eastern European	6.5	6.6
Married	55.7	54.1	Russian	5.4	3.1
Common-Law	6.8	2.2	Scandinavian	6.9	5.7
Divorced/ Separated	9.7	12.2	Aboriginal	2.2	2.6
Widowed	4.2	4.8	South Asian	0.7	1.3
Age			East/Southeast Asian	2.8	3.5
18-24	12.8	14.4	Latin/Central South American	0.6	1.3
25-29	10.9	14.8	Arab	0.3	0.9
30-34	13.8	10.9	Israeli	0.1	0.0
35-39	14.9	10.9	African	0.3	0.4
40-44	13.3	11.4	Caribbean	0.5	0.4
45-49	8.7	6.1	Central/South Pacific	0.3	0.0
50-54	7.0	7.4	Other (Mixed)	2.3	0.4
55-59	5.5	5.2	Income		
60-64	4.5	3.9	Less than \$10,000	4.6	9.2
65-69	3.3	5.7	\$10,000 - \$19,999	9.7	18.3
70 or Older	5.1	9.2	\$20,000 - \$29,999	12.6	14.8

Demographic Variables	% Gamblers (n=1,592)	% Non-Gamblers (n=229)	Demographic Variables	% Gamblers (n=1,592)	% Non-Gamblers (n=229)
Education			\$30,000 - \$39,999	12.1	11.4
Elem or Junior High	3.8	8.7	\$40,000 - \$49,999	11.8	8.7
Some High School	10.8	10.5	\$50,000 - \$59,999	9.7	4.8
High School Grad	22.5	23.6	\$60,000 - \$69,999	7.2	4.8
Some College/Voc/Technical	13.9	10.0	\$70,000 - \$79,999	5.8	2.6
College/Voc/Technical Diploma	20.1	17.9	\$80,000 - \$89,999	3.6	1.7
Some University	8.4	7.9	\$90,000 - \$99,999	3.3	1.3
Undergraduate Degree	13.8	14.8	\$100,000 or over	8.4	5.7
Graduate Degree	4.2	3.5			
Professional Degree	2.4	3.1			

From Table 8, the following characteristics of current Alberta gamblers and non-gamblers are noted:

- gamblers are equally likely to be male as female; non-gamblers (52%) are somewhat more likely (48%) to be female.
- both gamblers (63%) and non-gamblers (56%) are more likely to be married or in a common-law relationship than single.
- non-gamblers (15%) are more likely than gamblers (8%) to be 65 years of age or older.
- the vast majority of both gamblers (85%) and non-gamblers (81%) have graduated from high school and received at least some post-secondary education or training.

- more than two-thirds of both gamblers (67%) and non-gamblers (70%) give their ethnic origin as British, French, or western European.
- non-gamblers (62%) are more likely than gamblers (51%) to have an annual household income of less than \$50,000, less than \$20,000 (28% vs. 14%), and less than \$10,000 (9% vs. 5%); gamblers (15%) are somewhat more likely than non-gamblers (9%) to have an annual household income of \$80,000 or more.

B. Demographic Profile of Current Gamblers

As well as deriving data on Alberta gamblers and non-gamblers, the survey identifies the demographic characteristics of three gambling cohorts identified by the SOGS, namely, CURRENT (i.e., have gambled in the past 12 months) non-problem (NPG), problem (PG), and probable pathological gamblers (PPG). Non-gamblers are excluded in the tables that follow in this section of the report so that the analysis can focus on the characteristics and behaviors amongst these three gambling cohorts. To begin, in Tables 9, 10, and 11, demographic characteristics (gender, age, marital status, ethnic origin, income) for each of these three cohorts are displayed, and the following highlights are evident:

- PPGs are more likely than NPGs to be male (67% vs. 50%).
- NPGs are more likely than either PGs (63% vs. 55%) or PPGs (63% vs. 42%) to be married or in a common-law relationship; PPGs (22%) are more likely than either PGs (2%) or NPGs (10%) to be divorced or separated; PGs (39%) are more likely than either NPGs (23%) or PPGs (31%) to be single and never have married.
- PPGs (22%) and PGs (31%) are more likely than NPGs (12%) to be under 25 years of age and under age 30 (PPGs=42%; PGs=47%; NPGs=22%); NPGs (9%) are more likely than PGs (4%) or PPGs (0%) to be 65 years of age or older.
- the majority of NPGs (67%), PGs (63%), and PPGs (67%) give their ethnic origin as British, French, or western European; PPGs (11%) are more likely to be Aboriginal than are PGs (6%) or NPGs (2%).
- PPGs (14%) are more likely than PGs (4%) and NPGs (4%) to have only an elementary or junior high school education.
- PPGs (28%) and PGs (24%) are almost two times more likely than NPGs (14%) to have an annual household income of less than \$20,000; NPGs (16%) are more likely than PGs (2%) or PPGs (14%) to have an annual household income of \$80,000 or more.

TABLE 9
Gender, Marital Status, Age of CURRENT Gamblers

Demographic Variables	% Non-Problem Gamblers (n=1,505)	% Problem Gamblers (n=51)	% Probable Pathological Gamblers (n=36)
Gender			
Male	49.6	56.9	66.7
Female	50.4	43.1	33.3
Marital Status			
Single-Never Married	22.7	39.2	30.6
Married	56.9	31.4	36.1
Common-Law	6.2	23.5	5.6
Divorced/Separated	9.6	2.0	22.2
Widowed	4.3	3.9	2.8
Age			
18-24	11.9	31.4	22.2
25-29	10.4	15.7	22.2
30-34	13.8	15.7	11.1
35-39	15.3	7.8	11.1
40-44	13.5	9.8	8.3
45-49	8.6	5.9	16.7
50-54	7.2	3.9	2.8
55-59	5.6	0.0	5.6
60-64	4.5	5.9	0.0
65-69	3.3	3.9	0.0
70 or Older	5.4	0.0	0.0

TABLE 10
Ethnicity of CURRENT Gamblers

Demographic Variables	% Non-Problem Gamblers (n=1,505)	% Problem Gamblers (n=51)	% Probable Pathological Gamblers (n=36)
Ethnic Origin			
British	40.7	31.4	38.9
French	7.1	13.7	11.1
Western European	19.1	17.6	16.7
Eastern European	6.4	7.8	8.3
Russian	5.3	9.8	2.8
Scandinavian	6.9	9.8	2.8
Aboriginal	1.9	5.9	11.1
South Asian	0.7	0.0	2.8
East/Southeast Asian	2.9	2.0	2.8
Latin/Central/South American	0.7	0.0	0.0
Arab	0.3	0.0	0.0
Israeli	0.1	0.0	0.0
African	0.3	0.0	0.0
Caribbean	0.5	0.0	0.0
Central/South Pacific	0.3	0.0	0.0
Other (Mixed)	2.4	0.0	2.8

TABLE 11
Education and Income of CURRENT Gamblers

Demographic Variables	% Non-Problem Gamblers (n=1,505)	% Problem Gamblers (n=51)	% Probable Pathological Gamblers (n=36)
Education			
Elem or Junior High	3.6	3.9	13.9
Some High School	10.6	17.6	8.3
High School Grad	22.1	29.4	30.6
Some College/Voc/ Technical	13.8	11.8	19.4
College/Voc/ Technical Diploma	20.5	15.7	8.3
Some University	8.5	3.9	11.1
Undergraduate Degree	14.0	15.7	5.6
Graduate Degree	4.4	0.0	2.8
Professional Degree	2.5	2.0	0.0
Income			
Less than \$10,000	4.5	2.0	11.1
\$10,000 - \$19,999	9.2	21.6	16.7
\$20,000 - \$29,999	12.3	19.6	13.9
\$30,000 - \$39,999	12.2	9.8	13.9
\$40,000 - \$49,999	12.0	9.8	5.6
\$50,000 - \$59,999	9.6	11.8	11.1
\$60,000 - \$69,999	7.2	11.8	0.0
\$70,000 - \$79,999	5.8	5.9	5.6
\$80,000 - \$89,999	3.8	0.0	2.8
\$90,000 - \$99,999	3.3	2.0	8.3
\$100,000 or over	8.8	0.0	2.8

1. Co-Habitation

The survey asked respondents to identify how many persons under 18 years of age were living in the same household; Table 12 summarizes responses for each of the three gambling cohorts. From this table, it is apparent that:

- PPGs (56%) are somewhat more likely than either NPGs (44%) or PGs (39%) to live in a household with at least one other person under 18 years of age.

TABLE 12
Comparison of CURRENT Gamblers' Co-Habitation

Co-Habitation	% Non-Problem Gamblers (n=1,505)	% Problem Gamblers (n=51)	% Probable Pathological Gamblers (n=36)
Persons under 18 living with respondent			
One	15.2	11.8	30.6
Two	18.7	19.6	19.4
Three	8.0	3.9	2.8
Four	1.8	3.9	2.8
Five or more	0.5	0.0	0.0
None	55.5	60.8	44.4

2. Religious Preference

Adult Albertans who participated in the survey were asked to identify their religious preference and to disclose the importance of religion in their life. Table 13 displays these data and the following highlights are noted:

- the vast majority of respondents are either Protestant or Catholic (NPGs=75%; PGs =75%; PPGs=64%); NPGs (48%) are more likely than PGs (35%) or PPGs (31%) to be Protestant; PGs (39%) and PPGs (33%) are more likely than NPGs (27%) to be Catholic.
- the majority of respondents claim that religion is very or somewhat important in their life (NPGs=63%; PGs =57%; PPGs=61%); NPGs (27%) are somewhat more likely than PGs (18%) and PPGs (19%) to indicate that religion is very important in their life.

TABLE 13
Comparison of CURRENT Gamblers' Religious Preferences

Religious Preference	% Non-Problem Gamblers (n=1,505)	% Problem Gamblers (n=51)	% Probable Pathological Gamblers (n=36)
Protestant	48.0	35.3	30.6
Catholic	27.0	39.2	33.3
Jewish	0.5	0.0	0.0
Muslim	0.7	0.0	0.0
Eastern beliefs (Buddhism, Hinduism)	1.1	0.0	2.8
Other	2.8	3.9	13.9
No Religion	18.3	19.6	16.7
How important is religion in your life?			
Very Important	27.1	17.6	19.4
Somewhat Important	35.9	39.2	41.7
Not Very Important	14.4	13.7	19.4
Not Important At All	3.4	7.8	2.8
Not Applicable	18.3	19.6	16.7

3. Employment

The final demographic characteristic that was garnered from the survey had to do with respondents' employment status, and Table 14 displays this information for the three gambling cohorts, with the following finding noted:

- two-thirds or more of all gamblers are employed either full- or part-time (NPGs=69%; PGs =69%; PPGs=72%); PPGs (17%) are somewhat more likely than PGs (8%) and considerably more likely than NPGs (3%) to be unemployed.

TABLE 14
Comparison of CURRENT Gamblers' Employment Status

Employment Status	% Non-Problem Gamblers (n=1,505)	% Problem Gamblers (n=51)	% Probable Pathological Gamblers (n=36)
Employed Full-Time	60.1	62.7	63.9
Employed Part-Time	9.0	5.9	8.3
Unemployed	3.2	7.8	16.7
Student-Employed FT/PT	4.1	7.8	0.0
Student-Not Employed	2.7	3.9	2.8
Retired	13.1	7.8	0.0
Homemaker	6.6	2.0	5.6
Other	1.0	2.0	2.8

C. Gambling Activities of Adult Gamblers

One of the main purposes of this research is to identify the preferred gambling activities of adult Albertans, along with their frequency and duration of play, and their expenditures on gambling. In this section, survey data in each of these three areas of gambling are displayed in various tables.

1. Gambling Preferences

In an effort to ascertain the importance of gambling as a recreational activity, respondents surveyed were asked to rank their interest in gambling from very interested to not interested at all. Table 15 displays these results, and the following observation is offered:

- PPGs (33%) are considerably more likely than PGs (12%) or NPGs (2%) to be very interested in gambling as a recreational activity.

TABLE 15
Comparison of CURRENT Gamblers' Perceptions of the
Importance of Gambling as a Recreational Activity

Gambling Interest	% Non-Problem Gamblers (n=1,505)	% Problem Gamblers (n=51)	% Probable Pathological Gamblers (n=36)
Very interested	1.5	11.8	33.3
Somewhat interested	22.3	68.6	38.9
Not very interested	41.1	15.7	13.9
Not interested at all	35.1	3.9	13.9

During the interviews, a list of 20 different types of gambling activities was read to respondents who were then asked to indicate if they had ever wagered money on each type and, if so, whether they had done so in the past 12 months. Table 16 displays this gambling activity for those gamblers who have played in the past 12 months. Survey respondents were also asked to identify their favorite type of gambling activity from this list; this information is summarized in Table 17. Highlights from these two tables are as follows:

- PPGs are more likely than NPGs to gamble on each of the 21 types of gambling activities listed except for raffles or fundraising tickets and speculating on stocks, options, or commodities markets; NPGs (10%) are as likely as PGs (10%) and less likely than PPGs (19%) to gamble at casinos outside Alberta; NPGs (25%) are more likely than PGs (22%) and PPGs (22%) to purchase stocks, options, or commodities.
- the majority of gamblers purchase lottery tickets (NPGs=74%; PGs =86%; PPGs=81%); raffles or fundraising tickets (NPGs=63%; PGs =71%; PPGs=52%); and instant-win or scratch tickets (NPGs=35%; PGs =69%; PPGs=58%).
- PPGs (67%) and PGs (61%) are considerably more likely than NPGs (18%) to play VLTs.
- NPGs (23%) claim their favorite type of gambling activity is purchasing lottery tickets; PGs claim theirs is bingo (14%), games of skill (14%), and games at local casinos (14%); PPGs claim theirs is wagering on VLTs (19%).

TABLE 16
Comparison of CURRENT Gamblers' Gambling Activities

Gambling Activity	% Bet on Activity in Past 12 Months		
	Non-Problem Gamblers (n=1,505)	Problem Gamblers (n=51)	Probable Pathological Gamblers (n=36)
Lottery tickets	74.4	86.3	80.6
Daily lottery games (e.g., Pick 3)	1.9	13.7	8.3
Instant-win or scratch tickets	35.2	68.6	58.3
Raffles or fundraising tickets	62.9	70.6	51.7
Break open, pull tabs, or Nevada tickets	9.2	27.5	33.3
Sport Select (e.g., Pro Line, Over/Under, Point Spread)	4.1	19.6	11.1
Bingo	11.1	23.5	41.7
Cards, board games with family or friends for money	13.9	23.5	25.0
Games of skill such as pool, golf, bowling, or darts for money	9.3	43.1	36.1
Arcade or video games for money	1.5	7.8	8.3
Gambling on the Internet	0.0	2.0	0.0
Video lottery terminals (VLTs)	18.1	60.8	66.7
Formal sports pools sponsored by charities (e.g., NAIT hockey draft)	7.5	21.6	11.1
Outcome of sporting events (i.e., with family, friends, co-workers)	8.2	25.5	33.3
Horse races (live at track and off-track)	4.9	19.6	22.2
Games at local casinos (e.g., ABS, Elbow River, K-Days, Calgary Stampede, local fairs)	5.8	21.6	33.3

Gambling Activity	% Bet on Activity in Past 12 Months		
	Non-Problem Gamblers (n=1,505)	Problem Gamblers (n=51)	Probable Pathological Gamblers (n=36)
Games at casinos outside Alberta (e.g., cards, dice, roulette, Keno, coin slots)	10.1	9.8	19.4
Sports with a bookie	0.1	2.0	2.8
Card games in card rooms (i.e., non-regulated rooms set up for cards)	0.9	5.9	2.8
Stocks, options, commodities markets	25.2	21.6	22.2
Ever spent money on any other form of gambling	0.6	0.0	2.8

TABLE 17
Comparison of CURRENT Gamblers'
Favorite Gambling Activities

Favorite Type of Gambling Activity	% Non-Problem Gamblers (n=1,505)	% Problem Gamblers (n=51)	% Probable Pathological Gamblers (n=36)
Lottery tickets	23.1	5.9	8.3
Daily lottery games (e.g., Pick 3)	0.1	0.0	0.0
Instant-win or scratch tickets	5.2	3.9	5.6
Raffles or fundraising tickets	9.8	3.9	0.0
Break open, pull tabs, or Nevada tickets	0.5	2.0	2.8
Sport Select (e.g., Pro Line, Over/Under, Point Spread)	1.7	2.0	2.8

Favorite Type of Gambling Activity	% Non-Problem Gamblers (n=1,505)	% Problem Gamblers (n=51)	% Probable Pathological Gamblers (n=36)
Bingo	5.3	13.7	8.3
Cards, board games with family or friends for money	7.6	3.9	5.6
Games of skill such as pool, golf, bowling, or darts for money	3.9	13.7	13.9
Arcade or video games for money	0.4	0.0	0.0
Gambling on the Internet	0.0	0.0	0.0
Video lottery terminals (VLTs)	3.7	11.8	19.4
Formal sports pools sponsored by charities (e.g., NAIT hockey draft)	1.3	2.0	0.0
Outcome of sporting events (i.e., with family, friends, co-workers)	2.5	3.9	0.0
Horse races (live at track and off-track)	3.3	3.9	8.3
Games at local casinos (e.g., ABS, Elbow River, K-Days, Calgary Stampede, local fairs)	2.1	13.7	8.3
Games at casinos outside Alberta (e.g., cards, dice, roulette, Keno, coin slots)	5.6	2.0	0.0
Sports with a bookie	0.0	2.0	0.0
Card games in card rooms (i.e., non-regulated rooms set up for cards)	0.2	0.0	0.0
Stocks, options, commodities markets	11.7	11.8	8.3
Other form of gambling	0.2	0.0	0.0
None/no response	6.4	0.0	8.3

2. Frequency and Duration of Play

As well as determining preferences for various types of gambling activities, respondents were asked to identify which types they played weekly, and furthermore, how much time they spent at a typical gambling session. This information is displayed in Tables 18 and 19 and the following highlights are noted:

- most gamblers do not participate in any one type of gambling activity on a weekly basis; however, both PPGs and PGs are more likely than NPGs to do so.
- the most frequent weekly gambling activity for each cohort is purchasing lottery tickets (PPGs=47%; PGs =31%; NPGs=21%).
- PPGs (36%) are considerably more likely than PGs (14%) or NPGs (1%) to play the VLTs on a weekly basis.
- NPGs (76%) are more likely than PGs (62%) and PPGs (52%) to spend less than one hour at play in a typical gambling session; conversely, PPGs (27%) and PGs (18%) are more likely than NPGs (13%) to spend three or more hours at a gambling session.

TABLE 18
Comparison of CURRENT Gamblers'
Most Frequently Cited Weekly Gambling Activities

Gambling Activity	% Who Bet Weekly		
	Non-Problem Gamblers (n=1,505)	Problem Gamblers (n=51)	Probable Pathological Gamblers (n=36)
Lottery tickets	21.1	31.4	47.2
Daily lottery games (e.g., Pick 3)	0.1	3.9	2.8
Instant-win or scratch tickets	2.0	17.6	22.2
Raffles or fundraising tickets	0.3	0.0	0.0
Break open, pull tabs, or Nevada tickets	0.3	2.0	2.8
Sport Select (e.g., Pro Line, Over/Under, Point Spread)	1.3	3.9	8.3
Bingo	1.5	5.9	11.1
Cards, board games with family or friends for money	1.3	2.0	5.6

Gambling Activity	% Who Bet Weekly		
	Non-Problem Gamblers (n=1,505)	Problem Gamblers (n=51)	Probable Pathological Gamblers (n=36)
Games of skill such as pool, golf, bowling, or darts for money	1.3	13.7	11.1
Arcade or video games for money	0.0	0.0	2.8
Gambling on the Internet	0.0	0.0	0.0
Video lottery terminals (VLTs)	1.0	13.7	36.1
Formal sports pools sponsored by charities (e.g., NAIT hockey draft)	0.1	0.0	2.8
Outcome of sporting events (i.e., with family, friends, co-workers)	0.5	2.0	5.6
Horse races (live at track and off-track)	0.3	2.0	0.0
Games at local casinos (e.g., ABS, Elbow River, K-Days, Calgary Stampede, local fairs)	0.3	0.0	13.9
Games at casinos outside Alberta (e.g., cards, dice, roulette, Keno, coin slots)	0.0	0.0	0.0
Sports with a bookie	0.0	2.0	0.0
Card games in card rooms (i.e., non-regulated rooms set up for cards)	0.1	0.0	2.8
Stocks, options, commodities markets	1.3	3.9	2.8
Ever spent money on any other form of gambling	0.1	0.0	2.8

TABLE 19
Comparison of Time CURRENT Gamblers Spend
in a Typical Gambling Session (All Types of Games)

Amount of Time Spent Gambling	% Non-Problem Gamblers (n=1,505)	% Problem Gamblers (n=51)	% Probable Pathological (n=36)
Less than 1 hour	76.3	62.4	51.7
1 to 2.9 hours	11.2	19.7	20.9
3 to 5.9 hours	11.1	15.5	21.9
6 to 11.9 hours	1.3	2.4	4.5
12 hours or more	0.1	0.0	1.0

3. Expenditures on Gambling

For each of the 20 types of gambling activities noted above, respondents were asked to estimate the amount of money they spent monthly on each activity and the largest amount of money they had ever wagered on any activity in one day of gambling. This question is posed to examine the extent to which individuals expose themselves to the risk of financial loss by gambling for money. Tables 20, 21, and 22 display the response frequency distributions for the three gambling cohorts for these questions, and highlights include:

- the total all gamblers wager per month is greatest for stocks, options and commodities (\$352,668); VLTs (\$20,643); casinos outside Alberta (\$16,449); and lotteries (\$12,828).
- NPGs' (\$216) and PGs' (\$345) greatest average monthly expenditure is on stocks, options, and commodities; for PPGs, this gambling activity ranks second to average monthly expenditures on VLTs (\$382 for VLTS vs. \$279 for stocks).
- NPGs (65%) are considerably more likely than PGs (49%) and PPGs (33%) to indicate the largest amount they have ever spent gambling in one day is \$19 or less; conversely, PPGs (12%) are more likely than PGs (4%) and NPGs (5%) to indicate this amount is \$1,000 or more.

TABLE 20
Comparison of CURRENT Gamblers'
Total Monthly Gambling Expenditures for All Respondents

Type of Gambling Activity	Non-Problem Gambler Total Monthly Expenditure (\$) (n=1,505)	R A N K	Problem Gambler Total Monthly Expenditure (\$) (n=51)	R A N K	Probable Pathological Gambler Total Monthly Expenditure (\$) (n=36)	R A N K
Stocks, options, commodities markets	325,001	1	17,617	1	10,050	2
Lottery tickets	11,160	2	882	5	786	10
Games at casinos outside Alberta (e.g., cards, dice, roulette, Keno, coin slots)	10,465	3	567	7	5,467	4
Bingo	6,981	4	1,197	4	1,274	9
Raffles or fundraising tickets	6,466	5	447	8	179	17
Video lottery terminals (VLTs)	4,730	6	2,179	2	13,734	1
Games of skill such as pool, golf, bowling, or darts for money	2,853	7	429	9	442	12
Cards, board games with family or friends for money	2,655	8	400	10	1,422	8
Instant-win or scratch tickets	2,589	9	380	11	382	14
Games at local casinos (e.g., ABS, Elbow River, K-Days, Calgary Stampede, local fairs)	2,212	10	195	16	7,798	3
Outcome of sporting events (i.e., with family, friends, co-workers)	2,169	11	736	6	1,846	5
Horse races (live at track and off-track)	1,540	12	354	12	199	16
Sport Select (e.g., Pro Line, Over/Under, Point Spread)	1,466	13	252	13	217	15
Card games in card rooms (i.e., non-regulated rooms set up for cards)	1,113	14	120	17	1,500	7
Break open, pull tabs, or Nevada tickets	796	15	216	15	1,598	6
Formal sports pools sponsored by charities (e.g., NAIT hockey draft)	532	16	234	14	407	13
Daily lottery games (e.g., Pick 3)	259	17	62	18	102	19
Arcade or video games for money	145	18	16	19	142	18
Ever spent money on any other form of gambling	24	19	0	21	30	20
Sports with a bookie	< 1	20	1,500	3	500	11
Gambling on the Internet	0	21	5	20	0	21
Total Monthly Expenditure for All Types of Gambling	383,157		27,788		48,075	

TABLE 21
Comparison of CURRENT Gamblers'
Average Monthly Gambling Expenditures/Respondent

Type of Gambling Activity	Non-Problem Gambler Average Monthly Expenditure (\$) (n=1,505)	RANK	Problem Gambler Average Monthly Expenditure (\$) (n=51)	RANK	Probable Pathological Gambler Average Monthly Expenditure (\$) (n=36)	RANK
Stocks, options, commodities markets	215.95	1	345.43	1	279.17	2
Lottery tickets	7.42	2	17.29	5	21.83	10
Games at casinos outside Alberta (e.g., cards, dice, roulette, Keno, coin slots)	6.95	3	11.12	7	151.86	4
Bingo	4.64	4	23.47	4	35.39	9
Raffles or fundraising tickets	4.30	5	8.76	8	4.97	17
Video lottery terminals (VLTs)	3.14	6	42.72	2	381.50	1
Games of skill such as pool, golf, bowling, or darts for money	1.90	7	8.41	9	12.28	12
Cards, board games with family or friends for money	1.76	8	7.84	10	39.50	8
Instant-win or scratch tickets	1.72	9	7.45	11	10.61	14
Games at local casinos (e.g., ABS, Elbow River, K-Days, Calgary Stampede, local fairs)	1.47	10	3.82	16	216.61	3
Outcome of sporting events (i.e., with family, friends, co-workers)	1.44	11	14.43	6	51.28	5
Horse races (live at track and off-track)	1.02	12	6.94	12	5.53	16
Sport Select (e.g., Pro Line, Over/Under, Point Spread)	0.97	13	4.94	13	6.03	15
Card games in card rooms (i.e., non-regulated rooms set up for cards)	0.74	14	2.35	17	41.67	7
Break open, pull tabs, or Nevada tickets	0.53	15	4.24	15	44.39	6
Formal sports pools sponsored by charities (e.g., NAIT hockey draft)	0.35	16	4.59	14	11.31	13
Daily lottery games (e.g., Pick 3)	0.17	17	1.22	18	2.83	19
Arcade or video games for money	0.10	18	0.31	19	3.94	18
Ever spent money on any other form of gambling	0.02	19	0.00	21	0.83	20
Sports with a bookie	<1	20	29.41	3	13.89	11
Gambling on the Internet	0.00	21	0.10	20	0.00	21
Average Monthly Expenditure For All Types of Gambling	12.12		25.95		63.59	

TABLE 22
Comparison of Largest Amount of Money
CURRENT Gamblers Wagered in One Day

Daily Amount Wagered	% Non-Problem Gamblers (n=1,505)	% Problem Gamblers (n=51)	% Probable Pathological Gamblers (n=36)
\$19 or less	64.6	48.8	33.2
\$20-\$49	15.6	21.0	19.9
\$50-\$99	5.7	5.5	11.2
\$100-\$499	8.5	18.6	15.8
\$500-\$999	1.0	2.4	8.2
\$1,000 or more	4.6	3.8	11.7

D. Behavior of Alberta Gamblers

As well as determining the demographic characteristics and gambling preferences of adult Alberta gamblers, the study endeavored to identify certain behaviors exhibited by non-problem, problem, and probable pathological gamblers. In this section, survey results pertaining to gamblers' earliest gambling experiences, motivations for gambling, co-participants who accompany the gambler, and problem gambling behavior are presented.

1. Earliest Gambling Experience

Respondents were asked to recall their earliest gambling experience, and furthermore, to identify the activity they first wagered money on. Results from these questions are displayed in Tables 23 and 24, and highlights include the following:

- PPGs (25%) and PGs (18%) are more likely than NPGs (8%) to indicate that their first gambling experience was at 10 years of age or younger.
- for each gambler cohort, this first experience was most likely to be playing cards or board games for money with family or friends (NPGs=23%; PGs =37%; PPGs=39%).

TABLE 23
Comparison of CURRENT Gamblers'
Age of First Gambling Experience

Age When First Gambled for Money	% Non-Problem Gamblers (n=1,505)	% Problem Gamblers (n=51)	% Probable Pathological Gamblers (n=36)
5 years or younger	0.8	2.0	0.0
6 to 10 years	6.8	15.7	25.0
11 to 15 years	17.7	23.5	36.1
16 to 20 years	38.5	41.2	22.2
Over 20 years	30.8	15.7	16.7
Don't know	5.3	2.0	0.0

TABLE 24
Comparison of CURRENT Gamblers'
Type of First Gambling Experience

Type of First Gambling Experience	% Non-Problem Gamblers (n=1,505)	% Problem Gamblers (n=51)	% Probable Pathological Gamblers (n=36)
Lottery tickets	23.4	3.9	8.3
Daily lottery games (e.g., Pick 3)	0.1	0.0	0.0
Instant-win or scratch tickets	5.6	5.9	0.0
Raffles or fundraising tickets	8.2	3.9	0.0
Break open, pull tabs, or Nevada tickets	0.7	0.0	2.8
Sport Select (e.g., Pro Line, Over/Under, Point Spread)	0.9	0.0	0.0
Bingo	9.3	11.8	5.6

Type of First Gambling Experience	% Non-Problem Gamblers (n=1,505)	% Problem Gamblers (n=51)	% Probable Pathological Gamblers (n=36)
Cards, board games with family or friends for money	23.2	37.3	38.9
Games of skill such as pool, golf, bowling, or darts for money	4.2	11.8	16.7
Arcade or video games for money	0.6	2.0	0.0
Gambling on the Internet	0.0	0.0	0.0
Video lottery terminals (VLTs)	1.9	0.0	8.3
Formal sports pools sponsored by charities (e.g., NAIT hockey draft)	0.9	2.0	2.8
Outcome of sporting events (i.e., with family, friends, co-workers)	3.6	7.8	2.8
Horse races (live at track and off-track)	5.1	3.9	11.1
Games at local casinos (e.g., ABS, Elbow River, K-Days, Calgary Stampede, local fairs)	2.3	3.9	2.8
Games at casinos outside Alberta (e.g., cards, dice, roulette, Keno, coin slots)	5.8	3.9	0.0
Sports with a bookie	0.0	0.0	0.0
Card games in card rooms (i.e., non-regulated rooms set up for cards)	0.2	0.0	0.0
Stocks, options, commodities markets	2.6	2.0	0.0
Other form of gambling	0.8	2.0	0.0
Don't know	3.1	2.0	0.0

2. Motivating Reasons for Gambling

Each of the respondents was asked to identify motivating reasons for their gambling; Table 25 displays the frequency distributions for 10 separate reasons. From these data, it is evident that:

- each of the gambler cohorts is most likely to be motivated to gamble to win money (NPGs=41%; PGs=43%; PPGs=44%) followed by gambling for entertainment or fun (NPGs=23%; PGs=25%; PPGs=16%).
- PPGs (5%) and PGs (11%) are less likely than NPGs (17%) to suggest they gamble to support worthy causes.

TABLE 25
Comparison of CURRENT Gamblers'
Motivating Reasons for Gambling

Motivating Reason	% Non-Problem Gamblers (n=1,505)	% Problem Gamblers (n=51)	% Probable Pathological Gamblers (n=36)
Do things with friends	3.4	1.7	4.5
Excitement/challenge	3.6	7.2	8.5
Hobby	0.6	0.0	2.5
To win money	40.8	43.3	43.7
Support worthy causes	16.8	11.3	4.5
Curiosity	1.9	1.4	0.0
Entertainment/fun	23.3	24.9	15.6
Distract from problems	0.2	1.0	0.5
Because I'm good at it	0.2	1.4	0.5
Other/more than 1 of the above	9.2	7.8	19.6

3. Gambling Co-Participants

The adult Alberta gamblers surveyed were asked to divulge who they participated with when gambling; Table 26 displays this information, notably:

- gamblers in each cohort are more likely to gamble with others than alone (NPGs=56%; PGs =62%; PPGs=62%).
- PPGs (10%) and PGs (17%) are somewhat less likely than NPGs (21%) to gamble with their spouse or partner.
- PPGs (33%) and PGs (32%) are somewhat more likely than NPGs (22%) to gamble with friends or co-workers.

TABLE 26
Comparison of CURRENT Gamblers' Co-Participants

Gambling Co-Participant	% Non-Problem Gamblers (n=1,505)	% Problem Gamblers (n=51)	% Probable Pathological Gamblers (n=36)
Alone	44.0	37.9	38.0
With spouse or partner	21.2	16.9	10.0
Other family members	8.5	7.2	12.0
Friends/co-workers	21.8	32.4	32.5
Other individual or group	0.4	0.0	0.5
More than one of the above	4.1	5.5	7.0

4. Problem Gambling Behavior

A main purpose of this research is to determine the extent of problem gambling in the adult Alberta population and to describe the gambling behavior of those who are experiencing problems. As mentioned elsewhere in this report, the SOGS is used to differentiate non-problem, problem, and probable pathological gamblers. Respondent scores on SOGS behavioral and borrowing items are presented in Tables 27 and 28, and the following highlights are offered:

- PPGs score higher than PGs and NPGs on all SOGS behavioral and borrowing items.
- PPGs and PGs score highest for the following SOGS behavioral items: spending more time or money gambling than intended (97% and 78%) and feeling guilty about gambling (92% and 59%).
- PPGs are most likely to get gambling money from cash withdrawals on credit cards (50%), household money (47%), or their spouse or partner (36%). PGs are most likely to get gambling money from cash withdrawals on credit cards (31%) or from their spouse or partner (20%).

TABLE 27
Comparison of CURRENT Gamblers' Scores on
SOGS-R Behavioral Items

Types of Behavioral Problem	% Non-Problem Gamblers (n=1,505)	% Problem Gamblers (n=51)	% Probable Pathological Gamblers (n=36)
Go back another day to win money you lost	0.9	19.6	47.3
Claim to be winning when in fact you lost	2.2	33.4	41.6
Spend more time or money gambling than you intended	6.8	78.4	97.2
People criticized your gambling	1.5	33.3	69.4
Felt guilty about gambling	4.7	58.8	91.7
Would like to stop gambling but felt you could not	0.4	3.9	41.7
Hidden signs of gambling from spouse, children, other important people	0.2	3.9	33.3
Had money arguments about your gambling	0.2	7.8	27.8
Missed work or school due to gambling	0.1	0.0	13.9

TABLE 28
Comparison of CURRENT Gamblers' Scores on
SOGS-R Borrowing Items

Borrowing to Finance Gambling or Pay Gambling Debts	% Non-Problem Gamblers (n=1,505)	% Problem Gamblers (n=51)	% Probable Pathological Gamblers (n=36)
Ever borrowed money and not paid it back as a result of gambling	0.1	0.0	30.6
From household money	0.7	13.7	47.2
Spouse or partner	1.7	19.6	36.1
Other relatives or in-laws	0.7	17.6	30.6
Loans from banks, loan companies, or credit unions	1.3	0.0	16.9
Cash withdrawals on credit cards	2.1	31.4	50.0
Money from loan sharks	0.0	0.0	5.6
Cashed in stocks, bonds, or other securities	0.7	3.9	13.9
Sold personal or family property	0.1	2.0	22.2
Writing bad cheques	0.1	0.0	8.3
Line of credit with a casino or bookie	0.1	2.0	5.6

To further examine problem gambling behavior, respondents were asked: whether their gambling had, in the past 12 months, caused them problems with the police; if they had ever felt they had a gambling problem and had contemplated seeking or actually sought help; whether they had ever experienced a dissociative state while gambling; and whether a parent, family member, relative, or someone important in their life ever had a gambling problem. The responses to these questions are displayed in Tables 29, 30, 31, and 32. Noteworthy findings include the following:

- most gamblers have never had problems with the law because of gambling-related activities, however, PPGs (6%) are more likely than PGs (2%) and NPGs (<1%) to have had problems.
- only two of the NPGs ever felt he or she had a gambling problem. PPGs (53%) are considerably more likely than PGs (4%) to have felt they had a gambling problem, to have wanted help to stop (22% vs. 2%), and to have sought help (11% vs. 0%).
- PPGs are more likely than PGs or NPGs to have experienced each of five dissociative states while gambling. The most frequently cited dissociative state for each cohort is losing track of time (PPGs=78%; PGs =57%; NPGs=14%).
- PPGs (28%) and PGs (28%) are less likely than NPGs (46%) to indicate that neither of their parents gamble for money.
- fewer PPGs (11%), PGs (6%), and NPGs (8%) report that only their mothers gamble for money in comparison to those who report that only their fathers do so (PPGs=25%, PGs=14%, and NPGs=9%).
- PPGs, and to a lesser extent PGs, are more likely than NPGs to indicate that a spouse or partner, mother or father, brother or sister, grandparent, relative, or someone important in their life has had a gambling problem.
- each gambling cohort is most likely to identify a friend or someone important, versus a family member, as having a gambling problem, and PPGs (47%) and PGs (45%) are more likely than NPGs (22%) to do so.

TABLE 29
Comparison of CURRENT Gamblers'
Problems with the Law

Problems with Police	% Non-Problem Gamblers	% Problem Gamblers	% Probable Pathological Gamblers
Ever been in trouble with the law because of activities related to gambling	0.1	2.0	5.6

TABLE 30
Comparison of CURRENT Gamblers'
Perceptions of a Gambling Problem and Efforts to Seek Help

Perception of a Gambling Problem and Efforts to Seek Help	% Non-Problem Gamblers (n=1,505)	% Problem Gamblers (n=51)	% Probable Pathological Gamblers (n=36)
In the past 12 months, felt you have had a problem with betting money or gambling	0.1	3.9	52.8
Have ever wanted help to stop gambling	0.1	2.0	22.2
Have tried to get help to stop gambling	0.1	0.0	11.1
Where did you go for help?			
Family	0.0	0.0	0.0
Friend	0.0	0.0	0.0
GA or other support group	0.0	0.0	8.3
Social worker, psychologist, psychiatrist	0.0	0.0	0.0
Minister, Priest, Rabbi	0.0	0.0	0.0
Family doctor	0.0	0.0	0.0
Crisis hotline	0.0	0.0	2.8
AADAC	0.0	0.0	2.8
Other alcohol or drug addiction treatment centre	0.1	0.0	0.0

TABLE 31
Comparison of CURRENT Gamblers' Dissociative States

Dissociative State	% Non-Problem Gamblers (n=1,505)	% Problem Gamblers (n=51)	% Probable Pathological Gamblers (n=36)
Felt like you were a different person	6.6	27.4	58.3
Felt like you were in a trance	4.3	27.5	53.8
Lost track of time	14.4	56.8	77.7
Felt like you were outside yourself, watching yourself gamble	1.8	15.7	19.4
After gambling, experienced a memory blackout for things that happened while you were gambling	0.4	3.9	25.1

TABLE 32
**Comparison of CURRENT Gamblers'
 Parent/Family Members' Gambling Behavior**

Parent/Family Members' Gambling Behavior	% Non-Problem Gamblers (n=1,505)	% Problem Gamblers (n=51)	% Probable Pathological Gamblers (n=36)
Did/do either of your parents gamble for money?			
Mother only	7.5	5.9	11.1
Father only	9.3	13.7	25.0
Both	34.5	49.0	30.6
Neither	45.5	27.5	27.8
Which of the following people in your life have had a gambling problem:			
Spouse or partner	2.8	5.9	22.2
Mother	2.1	7.8	19.4
Father	2.7	7.8	22.2
Brother or sister	6.0	7.8	22.2
Grandparent	2.1	3.9	22.2
Another relative	9.1	15.7	25.0
Friend or someone important	21.7	45.1	47.2

E. Alcohol, Tobacco, and Drug Use

A major objective of this study was to ascertain, analyse, and describe non-problem and problem gamblers' use of licit and illicit substances; namely, alcohol, tobacco, and drugs. To this end, respondents were asked questions about their general health; their alcohol, tobacco, and drug use; and about negative consequences of their substance abuse, including efforts to seek help. Responses to these questions are presented in this section of the report.

1. General Health

To explore the state of adult Alberta gamblers' and non-gamblers' physical and mental health, respondents were asked to rate their general health, and likewise, to rate their satisfaction with life in general. These ratings are presented in Tables 33 and 34 and the following highlights are noted:

- most gamblers and non-gamblers indicate that they are very or generally healthy, however, PPGs are less likely to do so (NGs=96%; NPGs=97%; PGs =96%; PPGs=75%).
- most gamblers and non-gamblers indicate that they are happy or satisfied with life. However, PPGs report being generally or very unhappy or dissatisfied with their lives (28%) to a much greater extent than do PGs (14%), NPGs (5%), or NGs (8%).
- most gamblers and non-gamblers have felt anxious, worried, upset, or depressed in the past 12 months at least some of the time (NGs=66%; NPGs 72%, PGs =69%, PPGs=64%). PPGs (33%) are more likely than PGs (18%), NPGs (5%), or NGs (8%) to admit feeling this way almost always or most of the time.

TABLE 33
Comparison of CURRENT Gamblers' and Non-Gamblers' Health

General Health	% Never Gambled in Past 12 Months (n=229)	% Non-Problem Gamblers (n=1,505)	% Problem Gamblers (n=51)	% Probable Pathological Gamblers (n=36)
Very healthy	47.6	42.5	33.3	25.0
Generally healthy	48.5	54.1	62.7	50.0
Generally unhealthy	2.6	2.6	3.9	22.2
Very unhealthy	0.9	0.5	0.0	2.8

TABLE 34
Comparison of CURRENT Gamblers' and Non-Gamblers'
Satisfaction with Life

Satisfaction with Life	% Never Gambled in Past 12 Months (n=229)	% Non-Problem Gamblers (n=1,505)	% Problem Gamblers (n=51)	% Probable Pathological Gamblers (n=36)
Very happy or satisfied	40.6	40.0	29.4	16.7
Generally happy or satisfied	50.2	54.5	54.9	52.8
Generally unhappy or dissatisfied	5.7	3.9	9.8	19.4
Very unhappy or dissatisfied	2.2	1.3	3.9	8.3
How often have you felt anxious, worried, upset, or depressed in past 12 months?				
Almost always	1.3	1.1	5.9	13.9
Most of the time	7.0	3.5	11.8	19.4
Some of the time	65.5	72.0	68.6	63.9
Never	24.9	23.0	11.8	2.8

2. Alcohol, Tobacco, and Drug Use

Survey respondents were asked to disclose the extent to which they used alcohol, tobacco products, and drugs (marijuana, hallucinogenic drugs, cocaine, heroin) in the past 12 months. Frequency distributions for responses to these questions are displayed in Tables 36 and 37; the following highlights are noted:

- PPGs (47%) and PGs (59%) are more likely than NGs (15%) and NPGs (31%) to be frequent drinkers, having consumed alcohol once/week or once/day in the past 12 months.
- PPGs (56%) and PGs (59%) are more likely than NGs (18%) and NPGs (31%) to consume three or more drinks at one time and to have done so five or more times in the past 12 months (PPGs=14%; PGs =16%; NGs =2%; NPGs=4%).
- NGs (72%) and NPGs (61%) are considerably more likely than PGs (31%) and PPGs (22%) to be non-smokers and non-users of marijuana (NGs =93%; NPGs=91%; PGs =71%; PPGs=69%).

- PPGs (72%) and PGs (61%) are far more likely than NPGs (33%) or NGs (22%) to be daily consumers of tobacco products.
- in the past 12 months, most gamblers did not use hallucinogenic drugs, cocaine, crack, heroin, or other drugs, however, PPGs were somewhat more likely than PGs or NPGs to have done so.

TABLE 35
Comparison of Alcohol Use Among
CURRENT Gamblers and Non-Gamblers

Alcohol Use	% Never Gambled in Past 12 Months (n=229)	% Non-Problem Gamblers (n=1,505)	% Problem Gamblers (n=51)	% Probable Pathological Gamblers (n=36)
How often have you used alcohol in the past 12 months?				
Not at all	38.0	15.9	9.8	16.7
Once a month or less	32.8	29.0	13.7	22.2
2-3 times/month	14.0	24.1	17.6	13.9
Once or more/week	10.9	26.2	51.0	30.6
Once or more/day	3.9	4.5	7.8	16.7
How many drinks do you usually have at one time?				
Less than 1 drink	4.8	4.1	0.0	0.0
1-2 drinks	38.0	48.6	31.4	27.8
3-4 drinks	10.9	22.6	31.4	25.0
5 or more drinks	7.4	8.2	27.5	30.6
How many times in the last month have you had 5 or more drinks at one time?				
Never had 5 or more drinks at one time	3.9	5.4	2.0	0.0
Not once in last month	41.9	47.4	29.4	33.3
1-2 times	10.5	20.3	27.4	25.0
3-4 times	3.0	6.5	15.7	11.1
5 or more times	1.7	4.2	15.7	13.9

TABLE 36
Comparison of Substance Use Among
CURRENT Gamblers and Non-Gamblers

Substance Use in the Past 12 Months	% Never Gambled in the Past 12 Months (n=229)	% Non-Problem Gamblers (n=1,505)	% Problem Gamblers (n=51)	% Probable Pathological Gamblers (n=36)
Tobacco Products				
Not at all	71.6	60.7	31.4	22.2
Once a month or less	2.2	2.8	2.0	2.8
2-3 times/month	1.7	1.3	2.0	0.0
Once or more/week	1.7	2.1	3.9	2.8
Once or more/day	22.3	32.8	60.8	72.2
Marijuana				
Not at all	93.4	90.8	70.6	69.4
Once a month or less	2.6	5.3	5.9	8.3
2-3 times/month	0.9	1.1	9.8	5.6
Once or more/week	1.3	1.7	7.8	2.8
Once or more/day	1.3	0.8	5.9	13.9
Hallucinogenic drugs (LSD, PCP, Magic Mushrooms)				
Not at all	97.8	98.4	94.1	91.7
Once a month or less	1.3	1.3	5.9	8.3
2-3 times/month	0.0	0.1	0.0	0.0
Once or more/week	0.4	0.0	0.0	0.0
Once or more/day	0.0	0.0	0.0	0.0
Cocaine or crack (base)				
Not at all	98.7	99.0	96.1	88.9
Once a month or less	0.4	0.6	3.9	11.1
2-3 times/month	0.0	0.1	0.0	0.0
Once or more/week	0.4	0.1	0.0	0.0
Once or more/day	0.0	0.0	0.0	0.0
Heroin				
Not at all	99.1	99.6	100.0	100.0
Once a month or less	0.4	0.2	0.0	0.0
2-3 times/month	0.0	0.0	0.0	0.0
Once or more/week	0.0	0.0	0.0	0.0
Once or more/day	0.0	0.0	0.0	0.0
Used any other drugs in the past 12 months	0.4	0.3	0.0	5.6

3. Negative Consequences of Substance Abuse

The study examined some of the negative consequences of respondents' substance abuse, notably experiencing difficulties with family or friends, operating a motor vehicle while under the influence, and getting in trouble with the police because of alcohol or drug use. Responses to these queries are displayed in Table 37 and the following findings are noted:

- most gamblers and non-gamblers have not had difficulties with family or friends because of alcohol or drug use in the past 12 months, however, PPGs and PGs are more likely to have had trouble on one or more occasions (PPGs=22%; PGs =24%; NPGs=5% NGs=3%).
- PPGs (25%) and PGs (33%) are more likely than NPGs (8%) or NGs (4%) to have operated a motor vehicle while under the influence of alcohol or drugs and to have had trouble with the police because of alcohol or drug use (PPGs=8%; PGs =10%; NPGs=2%; NGs =1%).

TABLE 37
Negative Consequences of Substance Use
For CURRENT Gamblers and Non-Gamblers

Negative Consequence (Past 12 months)	% Never Gambled in the Past 12 Months (n=229)	% Non-Problem Gamblers (n=1,505)	% Problem Gamblers (n=51)	% Probable Pathological Gamblers (n=36)
Number of times had difficulties with family or friends because of alcohol or drug use				
None	59.0	78.4	70.6	61.1
One time	1.7	2.7	13.7	5.6
2-3 times	0.9	2.1	3.9	5.6
4-9 times	0.4	0.3	2.0	5.6
10 times or more	0.0	0.3	3.9	5.6
Have operated a motor vehicle, boat, or air plane while under the influence	4.4	7.6	33.3	25.0
Had trouble with police because of alcohol or drug use	0.9	1.5	9.8	8.3

4. Efforts to Seek Help for Substance Abuse

Finally, respondents were asked if they ever wanted help for a perceived alcohol or drug problem; whether they had ever tried to get help; and if so, where had they gone for help. Responses to these questions are displayed in Table 38 and the following finding is noted:

- while most gamblers and non-gamblers have never felt they needed help to stop drinking alcohol or doing drugs, PPGs (14%) and PGs (10%) are more likely than NPGs (3%) or NGs (3%) to have felt this need. Moreover, PPGs (14%) are more likely than PGs (6%), NPGs (1%), or NGs (1%) to have sought help from a variety of sources.

TABLE 38
CURRENT Gamblers' and Non-Gamblers'
Efforts to Seek Help for Substance Abuse

Efforts to Seek Help	% Never Gambled in the Past 12 Months (n=229)	% Non-Problem Gamblers (n=1,505)	% Problem Gamblers (n=51)	% Probable Pathological Gamblers (n=36)
In the past 12 months, have you ever wanted help to stop drinking alcohol or doing drugs?	2.6	2.6	9.8	13.9
Have you ever tried to get help?	1.3	0.9	5.9	13.9
Where did you go for help?				
Family	0.0	0.1	2.0	2.8
Friend	0.0	0.1	2.0	2.8
AA or other support group	0.4	0.1	2.0	5.6
Social worker, psychologist, psychiatrist	0.0	0.1	0.0	0.0
Minister, Priest, Rabbi	0.0	0.0	2.0	0.0
Family doctor	0.0	0.2	2.0	2.8
Crisis hotline	0.0	0.0	0.0	0.0
AADAC	0.9	0.2	2.0	2.8
Other alcohol or drug addiction treatment centre	0.4	0.2	2.0	5.6

CHAPTER IV

COMPARING THE 1994 AND 1998 ALBERTA ADULT GAMBLING STUDIES

This 1998 study was carefully designed to replicate the 1994 study so that findings from each would be comparable. Consequently, changes in the demographic characteristics, gambling activities, and the behavior of adult Alberta gamblers could be identified four years later. In this chapter, changes in these three categorical areas between 1994 and 1998 are presented and statistically significant changes are identified in the tables that follow.

A. Changes in the Profile of Adult Gamblers

1. Changes in Gambling Classification

One of the research questions sought to determine the inter-study differences in lifetime and current prevalence rates for non-problem, problem, and probable pathological gamblers. Tables 39 and 40 present these comparative data as well as comparisons between non-gamblers and gamblers, and highlights include the following:

- there are statistically significantly more respondents who report gambling at least once in their lifetime (lifetime gamblers) in 1998 (97.0%) than in 1994 (93.0%).
- there are statistically significantly fewer respondents who report gambling in the past 12 months (current gamblers) in 1998 (87.4%) than in 1994 (90.3%).
- there are statistically significantly fewer problem gamblers in 1998 (2.8%) than there were in 1994 (4.0%). Conversely, there are more probable pathological gamblers (1.4% vs. 2.0%) over this four-year time period, however, this change is not statistically significant.

TABLE 39
Comparison of LIFETIME Gamblers and Non-Gamblers
(1994 vs. 1998 Studies)

Survey Sample		
Study Year	Non-Gamblers	Gamblers
1994	7.0%	93.0%
1998	3.0%	97.0%
∞		**

Gamblers		
Non-Problem Gamblers (SOGS=0,1,2)	Problem Gamblers (SOGS=3,4)	Probable Pathological Gamblers (SOGS=5+)
84.4%	5.9%	2.7%
89.1%	5.2%	2.7%

% of gamblers are based on the total sample

* Somewhat significant ($p \leq .05$)

** Statistically significant ($p \leq .01$)

TABLE 40
Comparison of CURRENT Gamblers and Non-Gamblers
(1994 vs. 1998 Studies)

Survey Sample		
Study Year	Non-Gamblers	Gamblers
1994	9.7%	90.3%
1998	12.6%	87.4%
∞		**

Gamblers		
Non-Problem Gamblers (SOGS=0,1,2)	Problem Gamblers (SOGS=3,4)	Probable Pathological Gamblers (SOGS=5+)
84.9%	4.0%	1.4%
82.6%	2.8%	2.0%
	*	

% of gamblers are based on the total sample

* Somewhat significant ($p \leq .05$)

** Statistically significant ($p \leq .01$)

2. Changes in the Demographic Profile of Current Gamblers

The study examined changes in the demographic characteristics (gender, age, annual household income, ethnic origin, education) of current gamblers between the 1994 and 1998 survey samples. These data are displayed in Table 41 and the following finding is noted:

- there are no statistically significant differences in the demographic profiles of 1994 and 1998 gamblers for these variables.

TABLE 41
Comparison of Demographic
Profiles of CURRENT Gamblers
(1994 vs. 1998 Studies)

Demographic Variables	1994 Study (n=1629)	1998 Study (n=1592)	∞	Demographic Variables	1994 Study (n=1629)	1998 Study (n=1592)	∞
Gender				Ethnic Origin			
Male	47.0	50.3		Caucasian	93.7	89.5	
Female	53.0	49.7		Aboriginal	2.0	2.3	
Age				Asian	3.2	3.7	
18-24	12.7	12.8		Black	0.5	0.8	
25-29	13.6	10.9		Other	0.6	3.7	
30-34	16.8	13.9					
35-39	16.6	15.0		Education			
40-44	11.9	13.3		Elem or Junior High	13.7	14.6	
45-49	9.0	8.8		High School Grad	32.0	22.5	
50-54	3.9	7.1		Some Coll/Voc/Tech	9.3	13.9	
55-59	4.3	5.5		Coll/Voc/Tech Dipl	17.2	20.1	
60-64	4.1	4.5		Some University	7.2	8.4	
65-69	3.7	3.3		Undergraduate Degree	15.8	13.8	
70 or older	3.4	5.1		Graduate Degree	3.3	4.2	
				Professional Degree	1.4	2.4	
Annual Household Income							
< \$50,000	61.9	57.2					
> \$50,000	38.1	42.8					

* Somewhat significant ($p \leq .05$)

** Statistically significant ($p \leq .01$)

B. Changes in Gambling Activities of Adult Albertans

As well as identifying changes in the demographic characteristics of the gambling population between 1994 and 1998, the study also endeavored to ascertain changes in the gambling activities of adult Albertans, including changes in gambling preferences, changes in the frequency and duration of play, and changes in expenditures on gambling. Data in these three categorical areas are displayed in the tables that follow.

1. Changes in Gambling Preferences

In the 1994 and 1998 surveys, respondents were presented with 20 activities and asked to report whether they had gambled for money on each. These two lists were identical except for two notable exceptions. First, in 1998, respondents were asked if they had ever gambled on the Internet—this question was not asked in 1994. Second, in 1994, respondents were asked, as a separate item, if they had wagered on coin slot machines. In the 1998 survey, this question was not asked as coin slots were included as part of games at casinos (i.e., either local or outside Alberta). Consequently, in the data analysis that follows, neither gambling on the Internet nor gambling on coin slots are compared between 1994 to 1998. Table 42 displays these comparative data and the following highlights are noted:

- there are statistically significant changes in gambling activities for all types of games except for games of skill and sports with a bookie.
- fewer people report gambling on each activity except for VLTs, games at casinos outside Alberta, and the purchase of stocks, options, and commodities.
- percentage decreases in respondents' participation in various gambling activities range from 4% for lottery tickets to 71% for card games in non-regulated card rooms. The largest decreases are for card games in non-regulated card rooms (71%); outcome of sporting events (67%); daily lottery games (62%); and formal sports pools sponsored by charities (53%).
- percentage increases in respondents' participation in gambling activities are largest for stocks, options, and commodities markets (34%); games at casinos outside Alberta (30%); and video lottery terminal play (21%).

TABLE 42
Comparison of CURRENT Gamblers'
Gambling Activities (1994 vs. 1998 Studies)

Gambling Activity	% Bet on Activity in the Past 12 Months		
	1994 Gamblers (n = 1,629)	1998 Gamblers (n = 1,592)	∞
Lottery tickets (e.g., 6/49, Super 7)	78.7	75.2	*
Daily lottery games (e.g., Pick 3)	6.6	2.5	**
Instant-win or scratch tickets	65.5	36.9	**
Raffles or fundraising tickets	68.9	63.3	**
Break open, pull-tabs, or Nevada tickets	18.6	10.3	**
Sport Select (e.g., Pro Line, Over/Under, Point Spread)	7.6	4.7	**
Bingo	16.6	12.2	**
Cards, board games with family or friends for money	22.9	14.4	**
Games of skill such as pool, golf, bowling, or darts for money	13.0	11.0	
Arcade or video games for money	3.3	1.8	*
Video lottery terminals (VLTs)	17.0	20.6	*
Formal sports pools sponsored by charities (e.g., NAIT hockey draft)	17.2	8.1	**
Outcome of sporting events (i.e., with family, friends, co-workers)	27.8	9.3	**
Horse races (live at track and off-track)	9.3	5.8	**
Games at local casinos (e.g., ABS, Elbow River, K-Days, Calgary Stampede, local fairs)	9.5	7.0	*
Games at casinos outside Alberta (e.g., cards, dice, roulette, Keno)	7.9	10.3	*
Sports with a bookie	0.5	0.3	
Card games in card rooms (i.e., non-regulated rooms set up for cards)	3.8	1.1	**
Stocks, options, commodities markets	18.7	25.1	**

* Somewhat significant ($p \leq .05$)

** Statistically significant ($p \leq .01$)

2. Changes in Frequency of Play

Some gamblers wager on various games on a weekly basis. Table 43 displays the differences between weekly gamblers in 1994 and 1998; notable findings are as follows:

- from 1994 to 1998, significantly fewer gamblers are playing the following games weekly: lottery tickets, daily lottery games, instant-win or scratch tickets, raffles or fundraising tickets, bingo, games of skill, arcade or video games for money, and stocks, options, and commodities.
- most gamblers do not gamble weekly on any one type of activity, however, those who do are most likely to buy lottery tickets or instant-win or scratch tickets. Weekly wagering for both of these activities decreased significantly from 1994 to 1998—lottery tickets by 39% and daily lottery games by 85%.

TABLE 43
Comparison of CURRENT Gamblers'
Most Frequently Cited Weekly Gambling Activities
(1994 vs. 1998 Studies)

Gambling Activity	% Who Bet Weekly in the Past 12 Months		
	1994 Gamblers (n=1,629)	1998 Gamblers (n=1,592)	∞
Lottery tickets (e.g., 6/49, Super 7)	35.8	22.0	**
Daily lottery games (e.g., Pick 3)	2.0	0.3	**
Instant-win or scratch tickets	15.3	3.1	**
Raffles or fundraising tickets	1.0	0.3	*
Break open, pull tabs, or Nevada tickets	1.9	0.4	**
Sport Select (e.g., Pro Line, Over/Under, Point Spread)	1.5	1.5	
Bingo	3.5	1.9	**
Cards, board games with family or friends for money	2.1	1.4	
Games of skill such as pool, golf, bowling, or darts for money	3.1	1.9	*
Arcade or video games for money	0.7	0.1	*
Video lottery terminals (VLTs)	2.3	2.2	
Formal sports pools sponsored by charities (e.g., NAIT hockey draft)	0.4	0.1	

Gambling Activity	% Who Bet Weekly in the Past 12 Months		
	1994 Gamblers (n=1,629)	1998 Gamblers (n=1,592)	∞
Outcome of sporting events (i.e., with family, friends, co-workers)	0.9	0.6	
Horse races (live at track and off-track)	0.7	0.4	
Games at local casinos (e.g., ABS, Elbow River, K-Days, Calgary Stampede, local fairs)	0.2	0.6	
Games at casinos outside Alberta (e.g., cards, dice, roulette, Keno)	0.1	0.0	
Sports with a bookie	0.1	0.1	
Card games in card rooms (i.e., non-regulated rooms set up for cards)	0.2	0.2	
Stocks, options, commodities markets	2.5	1.4	*

* Somewhat significant ($p \leq .05$)

** Statistically significant ($p \leq .01$)

3. Changes in Expenditures on Gambling

For each of the 20 gambling activities included in both the 1994 and 1998 surveys, respondents were asked to estimate the amount they wagered monthly. Comparisons for these monthly gambling expenditures are displayed in Tables 44 and 45 and the following findings are noted:

- between 1994 and 1998, rankings of the top five gambling activities according to the largest total monthly expenditure and the average monthly expenditure on each changed as follows:

<u>1994</u>	<u>1998</u>
1. Stocks, commodities, options	1. Stocks, commodities, options
2. Lottery tickets	2. Video lottery terminals
3. Bingo	3. Games at casinos outside Alberta
4. Games at casinos outside Alberta	4. Lottery tickets
5. Video lottery terminals	5. Games at local casinos

- from 1994 to 1998, the total amount gamblers report spending on all gambling activities decreased from \$692,807 to \$459,020 (34%). Similarly, the average monthly expenditure decreased from \$22.38 to \$13.73 (39%).
- total monthly spending increased for only seven of the 20 activities listed: VLTs (\$11,596 or 128%); games at casinos outside Alberta (\$7,446 or 82%); games at local casinos (\$5,384 or 112%); sports with a bookie (\$1,693 or 550%); outcome of sporting events (\$375 or 9%) card games in card rooms (\$295 or 12%); and Sport Select (\$137 or 8%).
- the most significant total monthly spending decreases between 1994 and 1998 are for the following gambling activities: stocks, options, and commodities (\$233,880 or 40%); horse races (\$6,600 or 76%); instant-win or scratch tickets (\$4,912 or 60%); games of skill (\$4,461 or 55%); bingo (\$3,375 or 26%); and lottery tickets (\$2,655 or 17%).
- from 1994 to 1998, changes in the average monthly expenditures for each gambling activity correspond to changes in the total monthly revenue reported above. For instance, increases in average monthly expenditures were reported for only seven gambling activities (VLTs, games at casinos outside Alberta, games at local casinos, sports with a bookie, outcome of sporting events, card games in card rooms, and Sport Select).
- statistically significant changes are noted for four gambling activities where the average monthly expenditure declined (i.e., lottery tickets, daily lottery games, instant-win or scratch tickets, and stocks, options and commodities) and one where the average monthly expenditure increased (VLTs).

TABLE 44
Comparison of CURRENT Gamblers'
Total Monthly Gambling Expenditures for All Respondents
(1994 vs. 1998 Studies)

Type of Gambling Activity	1994 Gambler Total Monthly Expenditure (\$) (n=1,629)	R A N K	1998 Gambler Total Monthly Expenditure (\$) (n=1,592)	R A N K	∞
Lottery tickets (e.g., 6/49, Super 7)	15,483	2	12,828	4	
Daily lottery games (e.g., Pick 3)	1,201	17	423	18	
Instant-win or scratch tickets	8,263	8	3,351	11	
Raffles or fundraising tickets	8,482	7	7,092	7	
Break open, pull tabs, or Nevada tickets	3,537	13	2,610	13	
Sport Select (e.g., Pro Line, Over/Under, Point Spread)	1,798	15	1,935	16	

Type of Gambling Activity	1994 Gambler Total Monthly Expenditure (\$) (n=1,629)	R A N K	1998 Gambler Total Monthly Expenditure (\$) (n=1,592)	R A N K	∞
Bingo	12,827	3	9,452	6	
Cards, board games with family or friends for money	5,780	10	4,477	9	
Games of skill such as pool, golf, bowling, or darts for money	8,185	9	3,724	10	
Arcade or video games for money	558	18	303	19	
Video lottery terminals (VLTs)	9,047	5	20,643	2	
Formal sports pools sponsored by charities (e.g., NAIT hockey draft)	1,409	16	1,173	17	
Outcome of sporting events (i.e., with family, friends, co-workers)	4,376	12	4,751	8	
Horse races (live at track and off-track)	8,693	6	2,093	14	
Games at local casinos (e.g., ABS, Elbow River, K-Days, Calgary Stampede, local fairs)	4,821	11	10,205	5	
Games at casinos outside Alberta (e.g., cards, dice, roulette, Keno)	9,053	4	16,499	3	
Sports with a bookie	308	19	2,001	15	
Card games in card rooms (i.e., non-regulated rooms set up for cards)	2,438	14	2,733	12	
Stocks, options, commodities markets	586,548	1	352,668	1	
Other form of gambling	n/a		54	20	
Gambling on the Internet	n/a		5	21	
Total Monthly Expenditure for All Types of Gambling	692,807		459,020		

* Somewhat significant ($p \leq .05$)

** Statistically significant ($p \leq .01$)

TABLE 45
Comparison of CURRENT Gamblers'
Average Monthly Gambling Expenditures/Respondent
(1994 vs. 1998 Studies)

Type of Gambling Activity	1994 Gambler Average Monthly Expenditure (\$) (n=1,629)	R A N K	1998 Gambler Average Monthly Expenditure (\$) (n=1,592)	R A N K	∞
Lottery tickets (e.g., 6/49, Super 7)	9.50	2	8.06	4	*
Daily lottery games (e.g., Pick 3)	0.74	17	0.27	18	*
Instant-win or scratch tickets	5.07	8	2.11	11	**
Raffles or fundraising tickets	5.21	7	4.46	7	
Break open, pull tabs, or Nevada tickets	2.17	13	1.64	13	
Sport Select (e.g., Pro Line, Over/Under, Point Spread)	1.10	15	1.22	16	
Bingo	7.87	3	5.94	6	
Cards, board games with family or friends for money	3.55	10	2.81	9	
Games of skill such as pool, golf, bowling, or darts for money	5.02	9	2.34	10	
Arcade or video games for money	0.34	18	0.19	19	
Video lottery terminals (VLTs)	5.55	5	12.97	2	*
Formal sports pools sponsored by charities (e.g., NAIT hockey draft)	0.86	16	0.74	17	
Outcome of sporting events (i.e., with family, friends, co-workers)	2.69	12	2.98	8	
Horse races (live at track and off-track)	5.34	6	1.32	14	
Games at local casinos (e.g., ABS, Elbow River, K-Days, Calgary Stampede, local fairs)	2.96	11	6.41	5	

Type of Gambling Activity	1994 Gambler Average Monthly Expenditure (\$) (n=1,629)	R A N K	1998 Gambler Average Monthly Expenditure (\$) (n=1,592)	R A N K	∞
Games at casinos outside Alberta (e.g., cards, dice, roulette, Keno)	5.56	4	10.36	3	
Sports with a bookie	0.19	19	1.26	15	
Card games in card rooms (i.e., non- regulated rooms set up for cards)	1.50	14	1.72	12	
Stocks, options, commodities markets	360.07	1	221.53	1	*
Other form of gambling	n/a		0.03	20	
Gambling on the Internet	n/a		<.01	21	
Average Monthly Expenditure for All Types of Gambling	22.38		13.72		

* Somewhat significant ($p \leq .05$)

** Statistically significant ($p \leq .01$)

C. Changes in the Behavior of Alberta Gamblers

Finally, the study attempted to discern any changes in the behavior of adult Alberta gamblers from 1994 to 1998. The only valid comparisons that are possible between the two studies are behavioral changes that are based on differences in how respondents score on the South Oaks Gambling Screen. Ten behavioral items and eleven borrowing items from the SOGS are examined and findings are presented below.

The SOGS is utilized to examine respondents' gambling behavior, feelings about their gambling, and borrowing habits to finance gambling. Tables 46 and 47 display changes in the responses of current gamblers to various SOGS items in the 1994 and 1998 studies and the following highlights are noted:

- from 1994 to 1998, significantly fewer gamblers spent more time or money gambling than intended and significantly more felt guilty about gambling.
- from 1994 to 1998, significantly fewer gamblers borrowed from their spouse or partner and significantly more withdrew cash on credit cards to gamble or to pay gambling debts.

TABLE 46
Comparison of CURRENT Gamblers' Scores on SOGS-R Behavioral Items
(1994 vs. 1998 Studies)

Types of Behavioral Problem (in the past year)	% 1994 Gamblers (n=1,629)	% 1998 Gamblers (n=1,592)	α
Go back another day to win money you lost	16.0	14.4	
Claim to be winning when in fact you lost	5.0	4.1	
Spend more time or money gambling than you intended	14.0	11.1	*
People criticized your gambling	4.7	4.0	
Felt guilty about gambling	6.2	8.4	*
Would like to stop gambling but felt you could not	1.4	1.4	
Hidden signs of gambling from spouse, children, other important people	1.0	1.1	
Had money arguments about your gambling	1.3	1.1	
Missed work or school due to gambling	0.4	0.4	
Ever felt you had a problem with betting money or gambling	1.2	1.4	

* Somewhat significant ($p \leq .05$)

** Statistically significant ($p \leq .01$)

TABLE 47
Comparison of CURRENT Gamblers' Scores on SOGS-R Borrowing Items
(1994 vs. 1998 Studies)

Types of Borrowing (in the past year)	% 1994 Gamblers (n=1,629)	% 1998 Gamblers (n=1,592)	∞
Ever borrowed money and not paid it back as a result of gambling	0.7	0.8	
From household money	2.1	2.2	
Spouse or partner	7.0	3.1	**
Other relatives or in-laws	2.6	1.9	
Loans from banks, loan companies, or credit unions	1.1	1.6	
Cash withdrawals on credit cards	2.7	4.1	*
Money from loan sharks	0.1	0.1	
Cashed in stocks, bonds, or other securities	0.9	1.1	
Sold personal or family property	0.4	0.6	
Writing bad cheques	0.2	0.3	
Line of credit with a casino or bookie	0.5	0.3	

* Somewhat significant ($p \leq .05$)

** Statistically significant ($p \leq .01$)

CHAPTER V

CONCLUSIONS AND IMPLICATIONS

The goals of this study are two-fold: first, to examine and describe gambling activity and behavior in the adult Alberta population, and second, to compare findings with those from a similar study conducted by the same researchers in 1994. The specific objectives in this study are as follows:

- (1) to determine the prevalence of gambling and problem gambling within the population of adult Albertans (i.e., those 18 years of age and older);
- (2) to analyse and describe the characteristics and behavior of non-problem and problem gamblers;
- (3) to ascertain, analyse and describe non-problem and problem gamblers' use of licit and illicit substances (i.e., alcohol, tobacco, and drugs);
- (4) to compare 1998 research findings with results from the 1994 study; and
- (5) to offer conclusions and implications that may assist AADAC in prevention, education, treatment, and research initiatives designed to ameliorate problem gambling.

To meet these goals and objectives and to guide the study, five research questions and nine related sub-questions were developed. Data were gathered through a telephone survey of a random sample of adult Albertans who were 18 years of age or older. Respondents were selected from throughout the province and a questionnaire was developed for utilization in the telephone interviews. To every extent possible, the research methodology, notably sampling and instrument development, was the same as that incorporated in the 1994 study so that the comparisons would be valid.

Results from this research are presented in the previous two chapters. In this final chapter, conclusions and, where appropriate, implications of the findings and conclusions are offered by the researchers.

A. Alberta Gambling and Problem Gambling Prevalence Rates

1. Gambling Participation Rates

This research examines the extent to which adult Albertans have ever gambled in their lifetime and whether they have done so in the past 12 months. It is evident that most Albertans (97%) have gambled at some time during their life and that most, albeit a somewhat lesser per cent (87%), have gambled in the past year. Compared with findings in 1994, the number who have gambled in their lifetime is up (from 93% to 97%) and, for those who have gambled in the past 12 months, the percentage is down (from 90% to 87%). While these changes are statistically significant, it is not possible to attribute them to any specific causal factor(s).

Implications. It may be that, while more people have experienced some form of gambling since 1994, more people are turning away from the experience. It is too early to tell if this is a trend that relates to Rose's (1980) observations about the "three gambling waves" of surging and subsiding public interest in, and social tolerance for, legal gambling. Future gambling researchers conducting replication studies in

Alberta and elsewhere are encouraged to conduct trend analyses to determine if, indeed, current gambling participation rates are decreasing over time.

2. Problem Gambling Prevalence Rates

The South Oaks Gambling Screen has been used in both the 1994 and 1998 Alberta studies to differentiate non-problem, problem, and probable pathological gamblers. The lifetime and current problem gambling prevalence rates decreased from 1994 to 1998 (lifetime rate from 5.9% to 5.2% and current rate from 4.0% to 2.8%). Conversely, the lifetime probable pathological rate remained the same between 1994 and 1998 (i.e., 2.7%), whereas, the current probable pathological rate increased from 1.4% to 2.0%. The only statistically significant change is for the decreased prevalence rate of current problem gamblers (i.e., 4.0% to 2.8%).

It may be concluded that both the lifetime and current problem gambling rates in Alberta have decreased between 1994 and 1998, and that the rate for current probable pathological gamblers who experience the most serious problems with their gambling has increased.

Implications. In the 1998 study, there are 3% fewer adult Albertans who gambled in the past 12 months than in the 1994 study. The rate for problem gamblers (i.e., those who are less afflicted than pathological gamblers but who, nevertheless, experience some gambling problems) decreased from 4% to 2.8% (a 30% decrease). Interestingly, the gambling rate for current probable pathological gamblers increased from 1.4% to 2.0% (a 43% increase) over this four-year period. It may be that some former Alberta problem gamblers have become probable pathological gamblers over the past four years, or conversely, they may have become non-problem gamblers. This speculation needs to be examined further in the context of the current debate as to whether disordered gambling is a dichotomous phenomenon (i.e., one is, or is not, a pathological gambler) that is best measured through cutoff scores (as with the SOGS), or whether it is best viewed as lying on a continuum between low and high levels of the disorder (The WAGER, 1997). The Alberta data appears to lend credence to viewing disordered gambling on a continuum, however, further research is needed to explore this prospect.

There are invariably a number of factors that may have influenced the decrease in problem gambling and the increase in probable pathological gambling in Alberta over the past four years. In 1994, a secondary analysis of the study data was conducted on the subset of problem gamblers and it is suggested that a similar secondary analysis of the 1998 data should also be conducted. By comparing these two analyses, it may be possible to identify the factors that are correlated with an increase in probable pathological gambling.

B. Demographic Profile of Gamblers and Problem Gamblers

1. Characteristics of Gamblers and Non-Gamblers

In the previous two chapters, the demographic characteristics of lifetime and current gamblers and non-gamblers are presented, as are comparisons for these variables between the 1994 and 1998 Alberta studies. In the 1998 study, the demographic profile for both lifetime and current gamblers and non-gamblers is virtually the same. Moreover, there are no significant changes in this profile from 1994 to 1998. Characteristics of gamblers and non-gamblers include the following:

- similarities in the demographic characteristics of lifetime and current gamblers and non-gamblers:
 - gamblers are equally likely to be male as female (non-gamblers are slightly more likely to be female).
 - virtually two-thirds of both gamblers and non-gamblers are likely to be married or living common-law.
 - more than 80% of both gamblers and non-gamblers have graduated from high school and received at least some post-secondary training.
 - about two-thirds of both gamblers and non-gamblers are of British, French, or western European ethnic origin.
 - more than one-half of both gamblers and non-gamblers have an annual household income of less than \$50,000.
- differences in the demographic characteristics of gamblers and non-gamblers:
 - lifetime gamblers are more likely to be divorced or separated.
 - lifetime non-gamblers are almost two times more likely to be under 24 years of age and almost two times more likely to be 65 years of age or older.
 - current non-gamblers are more likely to have a lower income—less than \$50,000, less than \$30,000, and less than \$10,000. Gamblers are over 1½ times more likely to have an annual income of \$80,000 or more.
- differences in the demographic characteristics of current gamblers in the 1994 and 1998 studies.
 - there are no significant differences in the demographic profiles of gamblers between 1994 and 1998.

In comparing the demographic characteristics of gamblers and non-gamblers—be they lifetime or current—it is evident that they are equally likely to be male as female; to be married or living common-law; to have completed high school and some post-secondary education; to be of British, French, or western European ethnic origin; and to have an annual household income under \$50,000. Conversely, gamblers differ from non-gamblers in that the former are more likely to be divorced or separated; less likely to be under 24 and over 65 years of age or over; and more likely to have a higher annual income, notably over \$80,000.

Implications. There appears to be some distinction between gamblers and non-gamblers in terms of demographic characteristics. These findings suggest there may be merit in examining the relationship between gambling and divorce/separation, age over 65, and household income levels. A secondary analysis of the 1998 data, as mentioned above, should explore the extent to which these demographic variables are correlated with disordered gambling. In this vein, it would be useful to explore this potential linkage through field interviews with problem gamblers from this study.

2. Characteristics of Non-Problem and Probable Pathological Gamblers

A major study objective is to differentiate non-problem and problem gamblers so as to better understand the phenomenon of disordered gambling in Alberta. As has been mentioned elsewhere in this

report, non-problem, problem and probable pathological gamblers are differentiated according to respondent scores on the 20-item South Oaks Gambling Screen which is included in the survey questionnaire. Findings reported in the previous two chapters highlight differences between these three gambling cohorts for respondents who have gambled in the past 12 months (current gamblers). It is most useful to contrast the characteristics of non-problem and probable pathological gamblers as these are the two most divergent groups in terms of severity of disordered gambling. In contrasting the demographic profiles of these two groups, the following observations are offered:

- probable pathological gamblers (PPGs) are more likely:
 - to be male.
 - to be single, divorced or separated.
 - to be under 30 years of age.
 - to be disproportionately Aboriginal in ethnic origin.
 - to have an annual household income of less than \$20,000.
 - to live in a household with at least one other person under 18 years of age.
 - to be Catholic.
 - to be unemployed.
 - to have less than a high school education.
- non-problem gamblers (NPGs) are more likely:
 - to be married or living common-law.
 - to be 65 years of age or over.
 - to have an annual household income of \$80,000 or more.
 - to be Protestant.

The demographic profile of a probable pathological gambler in Alberta contains a number of elements as noted above. This profile is, of course, a generalization and it is recognized that some Albertans who do not fit the profile (e.g., females, persons over 30 years of age, married people, those with a high annual income, the employed) may also have a severe gambling problem.

Implications. Notwithstanding that profiling individuals with gambling disorders is a generalization exercise, this practice has utility in suggesting further avenues for research and in designing prevention, education, and treatment programs. As stated above, there is a need to conduct research that examines the relationship between problem gambling and gender, age, marital status, ethnicity, annual income, and unemployment. For instance, study findings in both 1994 and 1998 show a disproportionately high number of Aboriginal problem gamblers relative to the provincial population for this ethnic group, and this observation should continue to be examined. Finally, the relationship between gambling and religion could also be explored, including the possibility of developing church-based gambling support groups and using religious faith as a treatment strategy.

C. Gambling Activities of Adult Albertans

1. Type of Gambling Activities

Not surprisingly, probable pathological gamblers are three times more likely than non-problem gamblers to divulge that gambling is important to them as a recreational activity. As a predictable

consequence, probable pathological gamblers are also more likely than non-problem gamblers to wager on each of the 20 gambling activities presented, with the exception of purchasing raffle tickets, stocks, options, and commodities.

The most frequently cited gambling activity for Alberta gamblers is the purchase of various lottery products, most notably the Lotto 6/49, raffle, fund-raising, and instant-win or scratch tickets. Probable pathological gamblers are more likely to purchase instant-win type products where the feedback is immediate. Furthermore, these gamblers are more likely to prefer other continuous-play games where the sequence of wager-play-outcome occurs rapidly and can be repeated continuously. These games include VLTs, bingo, and games at casinos both within and outside Alberta (e.g., blackjack, roulette, Keno, dice).

Interest in VLT play is especially noteworthy. For probable pathological gamblers, VLT play ranks second only to the purchase of lottery tickets as the most preferred game (Table 16), and two-thirds of these gamblers claim to have played the VLTs in the past 12 months. In contrast, about one in six non-problem gamblers have played VLTs in the past year and, in comparison with other gambling activities, VLT play ranks fifth as the preferred gambling activity for non-problem gamblers.

There appears to be a relationship between what Dickerson (1993) has labelled “continuous games” and problem gambling. Continuous games are those that feature a short time span between placing a wager and learning the outcome of the gambling event. Examples of gambling formats that fit this category include electronic gambling (slot machines and VLTs), casino games (cards, dice, and Keno), bingo, pull-tab tickets, and instant-win/scratch tickets.

2. Frequency of Play

The findings show that, while most gamblers do not gamble weekly or for long periods of time at any one session, probable pathological gamblers are more likely than non-problem gamblers to do so. As the purchase of lottery tickets is the most frequent gambling activity for all gamblers, it is not unexpected to find that this is the activity that most non-problem and probable pathological gamblers engage in weekly. However, it is interesting to note that probable pathological gamblers are two times more likely than non-problem gamblers to purchase lottery tickets weekly, suggesting that the penchant for these most seriously afflicted problem gamblers to be more likely to wager on any form of activity even extends to the seemingly innocuous practice of purchasing lottery tickets weekly.

Again, findings relative to VLT play must be mentioned. Consistent with the finding that VLT play ranks second as probable pathological gamblers’ preferred gambling activity, VLT play also ranks second for these gamblers as a weekly pursuit. It must be noted, however, that most of these serious problem gamblers do not engage in VLT play on a weekly basis. Nevertheless, it is clear that probable pathological gamblers are 30 times more likely than non-problem gamblers to play VLTs weekly. What is less clear is the extent to which, and the manner in which, this specific form of gambling may contribute to pathological behavior for some.

3. Duration of Play

Probable pathological gamblers are not only more likely than non-problem gamblers to play more frequently (i.e., weekly), but they are also more likely to play for longer periods of time at any given session; notably, they are twice as likely to gamble for three or more hours at a time. This finding must be

placed in perspective, however, as most gamblers, including those with the most serious problems, do not usually gamble for long periods of time at any one sitting.

4. Expenditures on Gambling

The total all gamblers wager per month is greatest for stocks, options and commodities (\$352,668); VLTs (\$20,643); casinos outside Alberta (\$16,499); and lotteries (\$12,828). When one examines the average monthly expenditures for each type of gambling activity, it is evident that the spending patterns vary considerably between non-problem and probable pathological gamblers. For instance, gamblers who do not experience problems spend the largest total amount each month on stocks, options, and commodities, whereas, for probable pathological gamblers, the greatest total monthly expenditure is on VLTs. Even more distinguishing is the finding that probable pathological gamblers spend more on average each month on every type of gambling activity. The differences are most disparate for wagering on VLTs—probable pathological gamblers wager \$382 on average each month, whereas, non-problem gamblers wager \$3.

It may be concluded from this study that a disproportionate amount of gambling revenue from all types of gambling activities is contributed by Albertans with the most serious gambling problems. For instance, current probable pathological gamblers make up 2.0% of the total number of adult Albertans in the past year, yet they contribute 11% of the total self-reported gambling amount wagered. Similarly, current problem and probable pathological gamblers combined comprise 4.8% of the adult Albertans, yet they contribute 17% of the total self-reported gambling amount wagered. This finding supports that of Lesieur (1997) who discovered there are certain “problem gambling skewed” activities which extract an even greater percentage of their revenues from uncontrolled gamblers. Lesieur’s findings were based, in part, on an analysis of expenditure data from the 1994 Alberta study and he notes that, in Alberta, these “problem gambling skewed” activities are bingo, VLTs, and wagering on horse races (both on- and off-track).

5. Changes from 1994 to 1998

Gambling is clearly an enjoyable entertainment and recreational pursuit for many adult Albertans. Interestingly, however, when Alberta gamblers’ self-reported participation in various gambling activities between 1994 and 1998 is analysed, it is evident that participation rates are down considerably for every type of game except for the purchase of stocks, options, and commodities; games at casinos outside Alberta; and VLT play (weekly participation is also down except for play at local casinos). The largest decreases are noted for the following games: (1) card games in non-regulated card rooms; (2) outcome of sporting events; (3) daily lottery games; and (4) formal sports pools sponsored by charities. While the largest decreases in participation rates are noted for these games, the largest decreases in actual revenue are recorded for spending on: (1) stocks, options, and commodities, (2) horse races, (3) instant-win tickets, (4) games of skill; (5) bingo; and (6) lottery tickets. For some games, the decline in both participation rates and gross revenues is quite substantial. For instance, participation rates for horse races declined by 38% and the total amount wagered dropped by 76%, and rates for purchasing instant-win tickets dropped by 44% and the total amount wagered by 49%.

At first glance, the expenditure data appear to be under-reported as it is clear from government financial records that the total amount wagered by all Albertans has increased substantially in the past four years. When speculative investments are discounted, all gamblers surveyed collectively report a total

monthly expenditure for all other gambling activities of \$106,259 in the 1994 study and \$106,352 in the 1998 study. It is apparent from this that Alberta gamblers surveyed have reported virtually identical total monthly amounts for 1994 and 1998, respectively. These self-reported total gambling expenditures appear to be conservative under-estimates when compared with the actual total amount wagered as reported by the provincial government for these two fiscal years. This under-estimating is usual in gambling prevalence research, however, it is not problematic as the intent of asking respondents to self-report the amounts they wager is to ascertain levels of money various types of gamblers are willing to place at risk rather than to confirm actual provincial revenues.

Implications. Most adult Alberta gamblers enjoy participating in all forms of gambling activities as a form of entertainment and recreation. Moreover, most gamblers are able to control their play by incorporating strategies such as wagering only what they can afford to lose, setting time limits for their play, and participating in gambling activities in a social context with family or friends.

Notwithstanding this observation, the research findings in the 1994 and 1998 Alberta studies corroborate those from virtually all other gambling prevalence studies in North America in linking continuous-play games, such as VLTs, bingo, and many casino games (e.g., coin slots, blackjack, roulette, dice) to problem and pathological gambling (Dickerson, 1993). Moreover, many researchers are beginning to examine the addictive properties and nature of various continuous-play type games, notably electronic games such as VLTs (Morgan et al., 1996; Shaffer, 1996; Fisher and Griffiths, 1995; Dickerson et al., 1995; Smoliak, 1997). As electronic gambling formats proliferate in the future, deciding on the types of games that will be legally sanctioned and regulated is likely to become a major government policy issue. To advise this policy development, increased research efforts are needed to further explicate the relationship between various electronic gambling formats and disordered gambling to determine whether, and how, the harmful effects of continuous-play games can be mitigated while allowing most to enjoy this form of gambling entertainment.

D. Behavior of Alberta Gamblers

1. Early Experiences, Motivating Reasons, and Co-Participants

The majority of people are introduced to gambling in their childhood or early adolescence, usually in a social setting with family or friends. Moreover, this study corroborates the observations of others (Rosenthal, 1990) and findings from other research, including the 1994 Alberta adult gambling study (Wynne et al.) and the 1996 Alberta adolescent gambling study (Wynne et al.) that links an early gambling experience with problem gambling. That is, in the present study, probable pathological gamblers are three times more likely than non-problem gamblers to have had an early gambling experience (i.e., before 10 years of age) and, furthermore, it is most likely this experience was playing cards or board games for money with family or friends.

Most gamblers say they are motivated to gamble to win money and/or for entertainment or fun. The only significant difference between non-problem gamblers and probable pathological gamblers is that those in the former group are more likely to say they gamble to support worthy causes.

Most gamblers are also more likely to gamble with others than alone. The main difference between non-problem and probable pathological gamblers, in this vein, is that the latter are more likely to gamble with friends or co-workers and less likely to gamble with their spouse or partner.

Implications. Information on the importance of childhood gambling experiences has implications for gambling prevention programs. Parents need to be made aware of the importance of the family environment in the early socialization of children to gamble. There may be a vast difference between giving a young person a lottery ticket on his or her birthday and taking a 10-year-old to bingo every week. These types of contrasts should be used as the basis of prevention and education programs geared to sensitize parents and the public in general to the potential harm of early over-exposure of children to gambling. Parents need to be cognizant of their behavior as role models, as the study results indicate that probable pathological gamblers are more likely to have been raised in an environment where family members have been problem gamblers.

2. Problem Gambling Behavior

Not surprisingly, problem and probable pathological gamblers score higher on the South Oaks Gambling Screen than do non-problem gamblers as the purpose of this screen is to differentiate amongst these groups. Individuals with serious gambling problems exhibit dysfunctional behavior, notably: spending more time and money than planned; chasing their gambling loses by returning to play another day; lying about winnings; hiding evidence of gambling from family members; missing work because of gambling; and borrowing from a variety of sources to finance gambling or to pay gambling debts. This negative gambling behavior does not always go unnoticed by family, friends, and others as the individual experiencing problems is often criticized, is more likely to have arguments about his or her gambling, and frequently feels guilty about gambling.

As well as these negative behaviors and repercussions, the most seriously afflicted gamblers sometimes face more serious consequences associated with their gambling problem. For instance, study findings show that probable pathological gamblers are more likely than non-problem gamblers to have had problems with the law (although this is a relatively small percentage), and to have experienced one of five dissociative states, notably losing all track of time or feeling like another person while gambling.

While it is apparent that many probable pathological gamblers are aware that their out-of-control gambling behavior is causing them problems, few claim they have ever wanted help to stop gambling and fewer still have ever sought help. It appears that these gamblers have a heightened awareness of problem gambling behavior, in general, as the study shows that probable pathological gamblers are more likely than non-problem gamblers to be able to identify various important people in their life who, likewise, have a gambling problem (i.e., spouse, mother, father, sibling, relative, friend).

E. Alcohol, Tobacco, and Drug Use by Alberta Gamblers

Finally, one of the main objectives of the 1998 study is to ascertain the tobacco, alcohol, and drug use by Alberta gamblers and non-gamblers (these data were not collected in the 1994 study, therefore, no comparisons to this earlier research are made).

In terms of differences between gambler cohorts relative to their general health, alcohol, tobacco, and drug use, the following conclusions are offered:

- the vast majority of gamblers claim to be generally healthy and satisfied with their life. However, probable pathological gamblers are less likely than non-problem gamblers to feel this way and, moreover, those with the most serious gambling problems are more likely to admit to feeling anxious, worried, upset, or depressed almost always or most of the time.
- probable pathological gamblers are about 1½ times more likely than non-problem gamblers to be both frequent (i.e., weekly or daily) and heavy drinkers (i.e., three or more drinks/session). Interestingly, non-problem gamblers are, themselves, over 1½ times more likely than non-gamblers to be both frequent and heavy drinkers.
- probable pathological gamblers are two times more likely than non-problem gamblers to be smokers. Once again, as with alcohol consumption, non-problem gamblers are more likely than non-gamblers to be smokers.
- few of the gamblers in any cohort use marijuana, hallucinogenic drugs, cocaine, or heroin. Nevertheless, those who do so are more likely to be probable pathological gamblers.
- although most gamblers have never had difficulties with family or friends because of their alcohol or drug use, probable pathological gamblers are somewhat more likely to have had these difficulties.
- although most gamblers claim to have never operated a motor vehicle while under the influence of alcohol or drugs nor to have had trouble with the police, probable pathological gamblers are three times (operating a motor vehicle) and 5½ times (trouble with police) more likely than non-problem gamblers to have reported this.
- most gamblers disclose that they have never wanted help to stop drinking alcohol or doing drugs, nor have they sought help; however, probable pathological gamblers are over five times more likely than non-problem gamblers to have felt this way. Interestingly, probable pathological gamblers are 1½ times more likely to have felt the need for help for a gambling problem than for a drug or alcohol problem.

These findings lead to the conclusion that pathological gambling is frequently accompanied by heavy use of alcohol, tobacco, and, to a lesser extent, drugs for some individuals. In the past five years, there has been a growing awareness of the multiple-addictions phenomenon in both research and in treatment practice, and clinicians are more vigilant in screening clients for a constellation of addiction problems.

F. A Final Comment on VLTs

This research examines the present gambling activities of adult Albertans and compares the findings to a similar baseline study conducted in 1994 (Wynne, Smith, and Volberg, 1994). A large amount of quantitative data were collected through telephone interviews with the 1,821 study respondents and this report is the first effort to describe the overall study findings and posit the general conclusions supported by these descriptive data. This report is delimited to presenting and describing the results

relative to the survey questionnaire items and it is expected that further secondary analyses of the study data will be conducted to explore various correlations among variables, test hypotheses, identify statistically significant relationships, and generally probe the data in more depth so as to provide even richer information relative to adult gambling in Alberta.

While there are many salient findings and conclusions in this report, one of the most important relates to Albertans' gambling on video lottery terminals (VLTs). First, it is clear from government records of the total amount wagered between 1991 and 1996 (an increase from \$26 million to \$1.8 billion) that many Albertans have taken to engaging in this form of gambling. These dollar increases are further confirmed by study respondents' self-reporting of the amount they wager on VLTs--the total monthly expenditure on VLTs as reported by all who played the machines rose from \$9,047 in 1994 to \$20,643 in 1998. Similarly, the average monthly expenditure on VLTs of all those who gambled in the past year rose from \$5.55/month to \$12.97/month. This increase in interest and, correspondingly, in the total amount wagered is not surprising as the number of VLTs distributed across the province increased from 1,767 in 1992/93 when the first Alberta gambling study field interviews were conducted to 5,957 in September, 1997, when the present study was fielded.

In terms of the relationship between VLT play and problem/pathological gambling, it is evident from this research that, in 1998, two-thirds (66.7%) of the probable pathological gamblers and more than half (60.8%) of the problem gamblers wagered on VLTs in the past year. This is in contrast with the non-problem gambler group where only 18.1% had done so. It must be pointed out that these most severely afflicted gamblers are also more likely to wager on virtually all forms of gambling and, in particular, continuous-play games such as bingo, casino games (e.g., roulette, blackjack), and instant-win or pull-tab tickets. Nevertheless, the above-mentioned and following findings suggest that there is a relationship specifically between VLT play and problem gambling:

- probable pathological gamblers (19%) and problem gamblers (12%) are more likely than non-problem gamblers (4%) to report that their favorite gambling activity is VLTs. Moreover, this ranks as the favorite activity for probable pathological gamblers compared with the ninth favorite activity for non-problem gamblers.
- intense frequency of play has long been associated in the research with problem gambling. In terms of high play frequency, probable pathological gamblers (36%) are far more likely than non-problem gamblers (1%) to report playing VLTs on a weekly basis. Moreover, for these gamblers experiencing the most severe problems, VLT play ranks second only to the purchase of lottery tickets as their most frequent weekly gambling activity.
- probable pathological gamblers report wagering more on VLTs monthly than on any other gambling activity. Furthermore, this amount comprises 67% of the total amount all gamblers report wagering monthly on VLTs, whereas, probable pathological gamblers comprise only 2% of the total number of gamblers in the study sample.

In conclusion, it is clear that findings in this study support those of other researchers who, likewise, conclude that gambling on VLTs is correlated with severe problem gambling. Further examination of this study data and other research is needed to explore this correlation, notably to examine the strength of the relationship, causal linkages, the presence of intervening variables, and the relationship of continuous-play games--VLTs and others--to severe problem gambling.

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APPENDIX 1

**Comparison of Survey Sample to
Alberta Adult Population**

TABLE 1
Comparison of Survey Sample to
Alberta Adult Population (18 years of age and older)

Demographic Variables	Sample (%) (n=1,821)	Alberta Adult Population (%) (n=1,969,252)	Demographic Variables	Sample (%) (n=1,821)	Alberta Adult Population (%) (n=1,969,252)
Gender			Ethnic Origin		
Male	49.9	49.5	British	40.4	20.0
Female	50.1	50.5	French	7.3	3.4
Marital Status			Western European	19.5	31.1
Single-Never Married	23.6	26.3	Eastern European	6.5	
Married	55.5	54.0	Russian	5.1	
Common-Law	6.2	6.9	Scandinavian	6.7	
Divorced/Separated	10.0	7.9	Aboriginal	2.2	4.6
Widowed	4.3	5.1	South Asian	0.8	3.6
Age			East/Southeast Asian	3.0	9.4
18-24	12.9	13.4	Latin/Central South American	0.7	0.7
25-29	11.4	46.5	Arab	0.4	1.1
30-34	13.4		Israeli	0.1	0.0
35-39	14.5		African	0.3	0.5
40-44	13.0		Caribbean	0.5	0.6
45-49	8.4	26.5	Central/South Pacific	0.3	0.1
50-54	7.1		Other (Mixed)	2.0	24.8
55-59	5.4		Income		
60-64	4.4		Less than \$10,000	5.2	2.4
65-69	3.6	13.6	\$10,000 - \$19,999	10.8	6.7
70 or Older	5.6		\$20,000 - \$29,999	12.8	13.0

Demographic Variables	Sample (%) (n=1,821)	Alberta Adult Population (%) (n=1,969,252)	Demographic Variables	Sample (%) (n=1,821)	Alberta Adult Population (%) (n=1,969,252)
Education			\$30,000 - \$39,999	12.0	13.5
Elem or Junior High	4.4	n/a	\$40,000 - \$49,999	11.4	12.4
Some High School	10.8	n/a	\$50,000 - \$59,999	9.1	13.0
High School Grad	22.6	21.0	\$60,000 - \$69,999	6.9	10.0
Some College/Vocation/Technical	13.4	n/a	\$70,000 - \$79,999	5.4	7.8
College/Vocation/Technical Diploma	19.8	29.0	\$80,000 - \$89,999	3.4	5.5
Some University	8.3	n/a	\$90,000 - \$99,999	3.1	4.0
Undergraduate Degree	14.0	16.0	\$100,000 or over	8.0	11.6
Graduate Degree	4.1		Refused	11.9	0.0
Professional Degree	2.5				
No degree, certificate, or diploma	0.0	34.0			

Note: 1996 census data are based on a 100% sample (i.e., the total Alberta population 18 years of age and older, which is 1,969,252 adults) except for educational levels which are based on a 20% sample. Furthermore, Statistics Canada educational level categories do not directly correspond to each of those utilized in the survey. Notably, census data show that 34% of respondents have not achieved an education degree, certificate or diploma, however it is not possible to ascertain the highest educational level these respondents have achieved (e.g., elementary, junior or senior high school, or some post-secondary).

APPENDIX 2

Telephone Contact Summary

TABLE 2
Telephone Contact Summary

	Number	Percentage of Total Numbers	Percentage of Eligible Numbers
Total Numbers Dialed	7,689	100.0	
Less business/fax numbers	1,724	22.4	
Less not in service/line trouble numbers	1,689	22.0	
Less no answer after call backs	1,233	16.0	
Less telephone number unusable ¹	322	4.2	
Total Eligible Telephone Contacts	2,721	35.4	100.0
Completed calls	1,823 ²		67.0
Refusals	853		31.3
Call terminated in progress	45		1.7

¹ Telephone numbers were classified as unusable for the following reasons: there were no respondents in the household that spoke or understood English; the respondent was hearing impaired; no respondents met the age requirements; quotas were full (e.g., sex, geographic location).

² Although 1,823 telephone interviews were conducted, only 1,821 cases were included in the sample. Two female interviewees scored as current problem and pathological gamblers, respectively, although they claim not to have gambled in the past twelve months. These two individuals were dropped from the sample after a second telephone interview determined their responses were unreliable.

APPENDIX 3

Alberta Adult Gambling Survey Questionnaire

ALBERTA ADULT GAMBLING SURVEY
(Final Version--September 1, 1997)

1. INTRODUCTION

Hello, my name is _____ and I am calling (say "long distance", if applicable) from the Population Research Lab at the University of Alberta. Have I dialled (**repeat the telephone number**)? Our Lab, on behalf of Wynne Resources, is conducting a public opinion study for the Alberta Alcohol and Drug Abuse Commission on the gambling activities and attitudes of Albertans and we would like to include your views.

Your response will help AADAC in identifying new directions for gambling policy and programs in Alberta. Your household is one of 1,800 being randomly surveyed throughout Alberta. First of all, can you tell me how many adults--persons who are 18 years or older--live in this household?

_____ **(Record the number).**
99. **Refused (Terminate call and thank them for their time)**

INTERVIEWER: **If no one 18 or older in household, terminate interview.**
 If only one person 18 years or older in household say:

I would like to speak to that person--would that be you?

INTERVIEWER: **If more than one person 18 years or older in household say:**

I would like to speak to the person in your household 18 years or older who has the next birthday--would that be you?

INTERVIEWER: **If no, ask to speak to that person.**
 If the person is not available, arrange call-back.

Good. I would like to interview you and I'm hoping that now is a good time for you. The interview will take about 15 minutes, depending on how many of the questions apply to you.

Before we start, I'd like to assure you that your participation is voluntary and that any information you provide will be kept completely confidential by both the Population Research Lab and Wynne Resources. If there are any questions that you do not wish to answer, please feel free to point these out to me and I'll go on to the next question. You of course have the right to terminate the interview at any time.

If you have any questions about the survey, you can phone the Study Supervisor in Edmonton at (403) 492-2505 (call collect) for further information.

INTERVIEWER: **If the person never gambles, doesn't believe in it, etc. say:**

We understand that not everyone gambles, but your opinions are still very important to us.

1. Agreed to do interview (**Thank them and go to Q.1**)
2. Refused to do interview (**Terminate and thank them for their time**)

II. GAMBLING ACTIVITY

People bet money and gamble on many different things such as buying lottery tickets, playing bingo, and betting money on card games with their friends.

1. How interested are you in gambling for money as a recreational activity? Would you say...**(Read)**

1. Very interested
2. Somewhat interested
3. Not very interested
4. Not interested at all
5. Don't know
0. Refused

I am now going to ask you whether you've bet money on some gambling activities.

2. Have you ever, in your life, bet or spent money on (_____)? **(Read list).**

Lottery tickets such as 649, Super 7, POGO
Daily lottery games (e.g. Pick 3)
Instant-win or scratch tickets
Raffles or fundraising tickets
Break open, pull tabs, or Nevada tickets
Sport Select (e.g. Pro Line, Over/Under, Point Spread)
Bingo
Cards, board games with family or friends for money
Games of skill such as pool, golf, bowling, or darts for money
Arcade or video games for money
Gambling on the Internet
Video lottery terminals (VLTs)
Formal sports pools sponsored by charities (e.g. NAIT hockey draft)
Outcome of sporting events (i.e. with family, friends, co-workers)
Horse races (live at track and off-track)
Games at local casinos (e.g. ABS, Elbow River, K-days, Calgary Stampede, local fairs)
Games at casinos outside Alberta (e.g. cards, dice, roulette, Keno, coin slots)
Sports with a bookie
Card games in card rooms (i.e. non-regulated rooms set up for cards)
Stocks, options, commodities markets
Ever spent money on any other form of gambling **(1-specify)**
Ever spent money on any other form of gambling **(2-specify)**
Ever spent money on any other form of gambling **(3-specify)**

1. Yes
2. No
3. Don't know
0. Refused

INTERVIEWER: If respondent does not say "Yes" to any activity, go to Q.14.

INTERVIEWER: Repeat Q.3 to Q.10 for all activities selected in Q.2

3. Have you bet or spent money on (_____) in the past 12 months?

- 1. Yes (Ask Q.4)
- 2. No
- 3. Don't know
- 0. Refused

4. How many times per month (based on the past 12 months) do you gamble for money on this activity?

_____ times

- 98. Less than once per month (Go to Q.6) (Specify # times per year _____)
- 99. Don't know (Ask Q.5)
- 0. Refused (Ask Q.5)

INTERVIEWER: If Q.4 is less than 4 times per month, go to Q.6. For "casinos outside Alberta," select 98 and record # of times per year.

5. Do you gamble for money on this activity at least once per week (based on the past 12 months)?

- 1. Yes
- 2. No
- 3. Don't know
- 0. Refused

INTERVIEWER: Q.5 not asked for "casinos outside Alberta".

6. How much time in hours do you normally spend on this activity in one visit or sitting?

_____ number of hours

- 98. Less than 1 hour (Specify number of minutes _____)
- 99. Don't know
- 0. Refused

7. How much money do you spend on this activity in a typical month (based on the past 12 months)?

\$ _____ amount per month

- 98. Yearly amount (Specify amount spent per year _____)

- 99. Don't know
- 0. Refused

INTERVIEWER: If the respondent is hesitant say: I am just looking for an approximate amount--rounded to the nearest five dollars.

If the respondent gives yearly amount, select "98" and record yearly amount.

8. In the past 12 months, what is the largest amount of money you ever gambled on this activity in any one day?

\$ _____ total amount

- 99. Don't know
- 0. Refused

9. Who do you participate in this activity with? **(Read to prompt if necessary. If more than one response, choose #6 and input all answers).**

- 1. Alone
- 2. With spouse or partner
- 3. With other family members
- 4. With friends or co-workers, or
- 5. With some other individual or group **(Specify)** _____
- 6. More than one **(Record all answers)**
- 7. Don't know
- 0. Refused

10. What are the main reasons why you participate in this activity (based on the past 12 months)? **(Read to prompt if necessary. If more than one answer, choose #12 and input all answers).**

- 1. In order to do things with your friends
- 2. For excitement or as a challenge
- 3. As a hobby
- 4. To win money
- 5. To support worthy causes
- 6. Out of curiosity
- 7. For entertainment or fun
- 8. To distract yourself from everyday problems
- 9. Because you're good at it
- 10. To be alone
- 11. For some other reason **(Specify)** _____
- 12. More than one **(Record all answers)**
- 13. Don't know
- 0. Refused

11. Thinking about these sorts of activities, which is your one favourite type of gambling activity? **(Record only one response).**

1. Lottery tickets such as 649, Super 7, POGO
2. Daily lottery games (e.g. Pick 3)
3. Instant-win or scratch tickets
4. Raffles or fundraising tickets
5. Break open, pull tab, or Nevada tickets
6. Sport Select (e.g. Pro Line, Over/Under, Point Spread)
7. Bingo
8. Cards, board games with family or friends for money
9. Games of skill such as pool, golf, bowling, or darts for money
10. Arcade or video games for money
11. Gambling on the Internet
12. Video lottery terminals (VLTs)
13. Formal sports pools sponsored by charities (e.g. NAIT hockey draft)
14. Outcome of sporting events (i.e. with family, friends, co-workers)
15. Horse races (live at track and off-track)
16. Games at local casinos (e.g. ABS, Elbow River, K-days, Calgary Stampede, local fairs)
17. Games at casinos outside Alberta (e.g. cards, dice, roulette, Keno, coin slots)
18. Sports with a bookie
19. Card games in card rooms (i.e non-regulated rooms set up for cards)
20. Stocks, options, commodities markets
21. Other (**Specify**) _____
22. Don't know
0. Refused

12. How old were you when you first tried gambling for money?

_____ age in years

99. Don't know
0. Refused

13. What type of gambling was that? (**Accept all responses. Read to prompt if necessary**)

1. Lottery tickets such as 649, Super 7, POGO
2. Daily lottery games (e.g. Pick 3)
3. Instant-win or scratch tickets
4. Raffles or fundraising tickets
5. Break open, pull tab, Nevada tickets
6. Sport Select (e.g. Pro Line, Over/Under, Point Spread)
7. Bingo
8. Cards, board games with family or friends for money
9. Games of skill such as pool, golf, bowling, or darts for money
10. Arcade or video games for money
11. Gambling on the Internet
12. Video lottery terminals (VLTs)
13. Formal sports pools sponsored by charities (e.g. NAIT hockey draft)
14. Outcome of sporting events (i.e. with family, friends, co-workers)
15. Horse races (live at track and off-track)
16. Games at local casinos (e.g. ABS, Elbow River, K-days, Calgary Stampede, local fairs)
17. Games at casinos outside Alberta (e.g. cards, dice, roulette, Keno, coin slots)
18. Sports with a bookie
19. Card games in card rooms (i.e non-regulated rooms set up for cards)

- 20. Stocks, options, commodities markets
- 21. Other (Specify) _____
- 22. Don't know
- 0. Refused

14. Do (did) either of your parents ever gamble for money?

- 1. Mother only
- 2. Father only
- 3. Both
- 4. Neither
- 5. Don't know
- 0. Refused

15. Can you tell me if any of the following people in your life have ever had a gambling problem?

a. Spouse or partner

- 1. Yes
- 2. No
- 3. Not applicable
- 4. Don't know
- 0. Refused

b. Mother

- 1. Yes
- 2. No
- 3. Don't know
- 0. Refused

c. Father

- 1. Yes
- 2. No
- 3. Don't know
- 0. Refused

d. Brother or sister

- 1. Yes
- 2. No
- 3. Not applicable
- 4. Don't know
- 0. Refused

e. Grandparent

- 1. Yes
- 2. No
- 3. Don't know
- 0. Refused

f. Another relative

1. Yes
2. No
3. Not applicable
4. Don't know
0. Refused

g. A friend/someone important in your life

1. Yes
2. No
3. Not applicable
4. Don't know
0. Refused

INTERVIEWER: If respondent did not say "Yes" to any activity in Q.2, go to Q.47.

III. SOUTH OAKS GAMBLING SCREEN

The next series of questions are part of a standard measurement scale which has been used throughout North America in surveys similar to this one. There are no right or wrong answers to the questions that follow. We want to know what your experiences have been. Please try to be as accurate as possible in your answers and remember that all this information is strictly confidential.

16. a. When you participate in the gambling activities we have discussed, how often do you go back another day to win back money you lost?

Would you say... (Read)

1. Never (Go to Q.17)
2. Some of the time (Ask Q.16b)
3. Most of the time (Ask Q.16b)
4. Every time (Ask Q.16b)
5. Don't know (Go to Q.17)
0. Refused (Go to Q.17)

b. How often have you done this in the past year. Would you say...(Read)

1. Never
2. Some of the time
3. Most of the time, or
4. Every time
5. Don't know
0. Refused

17. a. Have you ever claimed to be winning money from these activities when in fact you lost?

Would you say... (Read)

1. Never (Go to Q.18)
2. Some of the time (Ask Q.17b)
3. Most of the time (Ask Q.17b)
4. Every time (Ask Q.17b)
5. Don't know (Go to Q.18)
0. Refused (Go to Q.18)

b. How often have you done this in the past year. Would you say...(Read)

1. Never
2. Some of the time
3. Most of the time
4. Every time
5. Don't know
0. Refused

18. a. Do you ever spend more time or money gambling than you intended?

1. Yes (Ask Q.18b)
2. No (Go to Q.19)
3. Don't know (Go to Q.19)
0. Refused (Go to Q.19)

b. Have you done this in the past year?

1. Yes
2. No
3. Don't know
0. Refused

19. a. Have people ever criticized your gambling?

1. Yes (**Ask Q.19b**)
2. No (**Go to Q.20**)
3. Don't know (**Go to Q.20**)
0. Refused (**Go to Q.20**)

b. Have people criticized your gambling in the past year?

1. Yes
2. No
3. Don't know
0. Refused

20. a. Have you ever felt guilty about the way you gamble or about what happens when you gamble?

1. Yes (**Ask Q.20b**)
2. No (**Go to Q.21**)
3. Don't know (**Go to Q.21**)
0. Refused (**Go to Q.21**)

b. Have you felt this way in the past year?

1. Yes
2. No
3. Don't know
0. Refused

21. a. Have you ever felt that you would like to stop gambling, but didn't think that you could?

1. Yes (**Ask Q.21b**)
2. No (**Go to Q.22**)
3. Don't know (**Go to Q.22**)
0. Refused (**Go to Q.22**)

b. Have you felt this way in the past year?

1. Yes
2. No
3. Don't know
0. Refused

22. a. Have you ever hidden betting slips, lottery tickets, gambling money or other signs of gambling from your spouse or partner, children, or other important people in your life?

1. Yes (**Ask Q.22b**)
2. No (**Go to Q.23**)
3. Don't know (**Go to Q.23**)
0. Refused (**Go to Q.23**)

Have you done so in the past year?

1. Yes
2. No
3. Don't know
0. Refused

23. Have you ever argued with people you live with over how you handle money?

1. Yes (**Ask Q.24**)
2. No (**Go to Q.25**)
3. Don't know (**Go to Q.25**)
0. Refused (**Go to Q.25**)

24. a. Have these money arguments ever centred on your gambling?

- | |
|--|
| <ol style="list-style-type: none">1. Yes (Ask Q.24b)2. No (Go to Q.25)3. Don't know (Go to Q.25)0. Refused (Go to Q.25) |
|--|

b. Have you had any of these money arguments in the past year?

- | |
|---|
| <ol style="list-style-type: none">1. Yes2. No3. Don't know0. Refused |
|---|

25. a. Have you ever missed time from work or school due to gambling?

- | |
|--|
| <ol style="list-style-type: none">1. Yes (Ask Q.25b)2. No (Go to Q.26)3. Don't know (Go to Q.26)0. Refused (Go to Q.26) |
|--|

b. Have you done so in the past year?

- | |
|---|
| <ol style="list-style-type: none">1. Yes2. No3. Don't know0. Refused |
|---|

26. a. Have you ever borrowed money from someone and not paid them back as a result of your gambling?

- | |
|--|
| <ol style="list-style-type: none">1. Yes (Ask Q.26b)2. No (Go to Q.27)3. Don't know (Go to Q.27)0. Refused (Go to Q.27) |
|--|

b. Have you done so in the past year?

- | |
|---|
| <ol style="list-style-type: none">1. Yes2. No3. Don't know0. Refused |
|---|

I am going to read a list of ways in which some people get money for gambling. Can you tell me which of these, if any, you have ever used to get money for gambling or to pay gambling debts?

27. a. Have you ever borrowed from household money to gamble or to pay gambling debts?

1. Yes (Ask Q.27b)
2. No (Go to Q.28)
3. Don't know (Go to Q.28)
0. Refused (Go to Q.28)

b. Have you done so in the past year?

1. Yes
2. No
3. Don't know
0. Refused

28. a. Have you ever borrowed money from your spouse or partner to gamble or to pay gambling debts?
(Interviewer: If respondent has no spouse/partner, enter 2="no").

1. Yes (Ask Q.28b)
2. No (Go to Q.29)
3. Don't know (Go to Q.29)
0. Refused (Go to Q.29)

b. Have you done so in the past year?

1. Yes
2. No
3. Don't know
0. Refused

29. a. Have you ever borrowed money from other relatives or in-laws to gamble or to pay gambling debts?
(Interviewer: This includes children and other family members).

1. Yes (Ask Q.29b)
2. No (Go to Q.30)
3. Don't know (Go to Q.30)
0. Refused (Go to Q.30)

b. Have you done so in the past year?

1. Yes
2. No
3. Don't know
0. Refused

30. a. Have you ever gotten loans from banks, loan companies or credit unions for gambling or to pay gambling debts?

1. Yes (Ask Q.30b)
2. No (Go to Q.31)
3. Don't know (Go to Q.31)
0. Refused (Go to Q.31)

b. Have you done so in the past year?

1. Yes
2. No
3. Don't know
0. Refused

31. a. Have you ever made cash withdrawals on credit cards such as VISA or MasterCard to get money to gamble or to pay gambling debts? (Does not include ATM or instant cash cards).

1. Yes (Ask Q.31b)
2. No (Go to Q.32)
3. Don't know (Go to Q.32)
0. Refused (Go to Q.32)

- b. Have you done so in the past year?

1. Yes
2. No
3. Don't know
0. Refused

32. a. Have you ever gotten loans from loan sharks to gamble or to pay gambling debts?

1. Yes (Ask Q.32b)
2. No (Go to Q.33)
3. Don't know (Go to Q.33)
0. Refused (Go to Q.33)

- b. Have you done so in the past year?

1. Yes
2. No
3. Don't know
0. Refused

33. a. Have you ever cashed in stocks, bonds or other securities to gamble or pay gambling debts?

1. Yes (Ask Q.33b)
2. No (Go to Q.34)
3. Don't know (Go to Q.34)
0. Refused (Go to Q.34)

- b. Have you done so in the past year?

1. Yes
2. No
3. Don't know
0. Refused

34. a. Have you ever sold personal or family property to gamble or to pay gambling debts?

1. Yes (Ask Q.34b)
2. No (Go to Q.35)
3. Don't know (Go to Q.35)
0. Refused (Go to Q.35)

- b. Have you done so in the past year?

1. Yes
2. No
3. Don't know
0. Refused

35. a. Have you ever borrowed money from your chequing account by writing cheques that bounced to get money for gambling or to pay gambling debts?

1. Yes (**Ask Q.35b**)
2. No (**Go to Q.36**)
3. Don't know (**Go to Q.36**)
0. Refused (**Go to Q.36**)

b. Have you done so in the past year?

1. Yes
2. No
3. Don't know
0. Refused

36. a. Have you ever had a credit line with a casino or bookie?

1. Yes (**Ask Q.36b**)
2. No (**Go to Q.37**)
3. Don't know (**Go to Q.37**)
0. Refused (**Go to Q.37**)

b. Have you done so in the past year?

1. Yes
2. No
3. Don't know
0. Refused

37. a. Do you feel that you have ever had a problem with betting money or gambling?

1. Yes (**Ask Q.37b**)
2. No (**Go to Q.41**)
3. Don't know (**Go to Q.41**)
0. Refused (**Go to Q.41**)

b. Have you felt this way in the past year?

1. Yes
2. No
3. Don't know
0. Refused

38. Have you ever wanted help to stop gambling?

1. Yes (**Ask Q.39**)
2. No (**Go to Q.41**)
3. Don't know (**Go to Q.41**)
0. Refused (**Go to Q.41**)

39. Have you ever tried to get help to stop gambling?

1. Yes (**Ask Q.40**)
2. No (**Go to Q.41**)
3. Don't know (**Go to Q.41**)
0. Refused (**Go to Q.41**)

40. Where did you go for help? (Select all that apply. Read to prompt if necessary.)
1. Family
 2. Friend
 3. Gamblers Anonymous or other support group
 4. Social worker, psychologist, or psychiatrist
 5. Minister, Priest, Rabbi
 6. Family doctor
 7. Crisis hotline
 8. AADAC
 9. Other alcohol or drug addiction treatment centre
 10. Other (Specify) _____
 11. Don't know
 00. Refused
41. Have you ever been in trouble with the law because of activities related to gambling?
1. Yes
 2. No
 3. Don't know
 0. Refused
42. While gambling, have you ever felt like you were a different person? Would you say...(Read)
1. Almost always
 2. Most of the time
 3. Sometimes
 4. Never
 5. Don't know
 0. Refused
43. While gambling, have you ever felt like you were in a trance? Would you say...(Read)
1. Almost always
 2. Most of the time
 3. Sometimes
 4. Never
 5. Don't know
 0. Refused
44. While gambling, have you ever lost track of time? Would you say...(Read)
1. Almost always
 2. Most of the time
 3. Sometimes
 4. Never
 5. Don't know
 0. Refused

45. While gambling, have you ever felt like you were outside yourself, watching yourself doing it? Would you say...(Read)

1. Almost always
2. Most of the time
3. Sometimes
4. Never
5. Don't know
0. Refused

46. After gambling, have you ever experienced a memory blackout for things that happened while you were gambling? Would you say...(Read)

1. Almost always
2. Most of the time
3. Sometimes
4. Never
5. Don't know
0. Refused

IV. DEMOGRAPHICS

As you know, people have a variety of different opinions and experiences to do with gambling. We would now like to get some basic information from you. Like all your other answers, this information will be kept strictly confidential.

47. Are you male or female? **(Do not ask unless unsure)**

1. Male
2. Female

48. What is your marital status? **(Read)**

1. Single (never married)
2. Married
3. Common-law
4. Divorced or separated
5. Widowed
6. Don't know
0. Refused

49. As I read a list of age groups, please stop when I mention the group which includes your age. **(Read)**

1. 18 to 24
2. 25 to 29
3. 30 to 34
4. 35 to 39
5. 40 to 44
6. 45 to 49
7. 50 to 54
8. 55 to 59
9. 60 to 64
10. 65 to 69
11. 70 or older
12. Don't know
0. Refused

50. Which of the following best describes your racial or ethnic group? If you have multiple racial/ethnic origins, please select the one which you identify with most. Would you say...**(Read)**

1. British (e.g. English, Irish, Scottish, Welsh)
2. French (e.g. Acadian, Franco-Manitoban, French-Canadian)
3. Western European (e.g. German, Austrian, Spanish, Portugese, Italian)
4. Eastern European (e.g. Polish, Czech, Bosnian, Serbian)
5. Russian (include Ukrainian)
6. Scandinavian (e.g. Danish, Norwegian, Swedish)
7. Aboriginal (e.g. Metis, Inuit, North American Indian)
8. South Asian (e.g. Pakistani, East Indian, Punjabi)
9. East/Southeast Asian (e.g. Chinese, Filipino, Japanese)
10. Latin, Central or South American (e.g. Brazilian, Chilean, Mexican)
11. Arab (e.g. Egyptian, Iraqi, Lebanese)
12. Israeli

- 13. African
- 14. Caribbean (e.g. West Indian, Cuban, Jamaican)
- 15. Central/South Pacific (e.g. Tongan, Samoan)
- 16. Other (Specify) _____
- 17. Don't know
- 0. Refused

INTERVIEWER: If respondent says "Canadian" or "American," say: Most Canadians/Americans have some other racial or ethnic origin, even if it is from many generations ago. Thinking about this, would you say you are: Read list again putting "Canadian" or "American" after each response (e.g. Chinese-Canadian).

51. What is the highest level of education you have completed? Would you say...(Read)

- 1. Elementary or junior high school
- 2. Some high school
- 3. High school graduate
- 4. Some college, vocational, or technical school
- 5. A college, vocational or technical diploma
- 6. Some university
- 7. An undergraduate university degree
- 8. Post graduate (Masters/PhD)
- 9. Professional degree (MD, Law, Dentistry)
- 10. Don't know
- 0. Refused

52. What is your present job status? Would you say...(Read)

- 1. Employed full-time (30 or more hrs/week) (Ask Q.53)
- 2. Employed part-time (less than 30hrs/week) (Ask Q.53)
- 3. Unemployed (out of work but looking for work) (Ask Q.53)
- 4. Student--employed part-time or full-time (Ask Q.53)
- 5. Student--not employed (Go to Q.54)
- 6. Retired (Go to Q.54)
- 7. Homemaker (Go to Q.54)
- 8. Other (Specify) _____ (Ask Q.53)
- 9. Don't know (Go to Q.54)
- 0. Refused (Go to Q.54)

INTERVIEWER: If respondent gives more than one answer, record the one that appears first on the list.

53. What type of work do you do when you are employed? (If necessary, say "what is your job title?")

54. As I read a list of broad income categories, please stop me when I reach the category that includes your total household income (before taxes) for 1996.

1. Less than \$10,000
2. \$10,000 to \$19,999
3. \$20,000 to \$29,999
4. \$30,000 to \$39,999
5. \$40,000 to \$49,999
6. \$50,000 to \$59,999
7. \$60,000 to \$69,999
8. \$70,000 to \$79,999
9. \$80,000 to \$89,999
10. \$90,000 to \$99,999
11. \$100,000 or over
12. Don't know
0. Refused

55. How many people under 18 years-of-age live with you?

1. One
2. Two
3. Three
4. Four
5. Five or more
6. None
7. Don't know
0. Refused

56. Which of the following best describes your current religious preference? **(Read)**

1. Protestant
2. Catholic
3. Jewish
4. Muslim
5. Eastern beliefs (Buddhism, Hinduism)
6. Other (**Specify**) _____
7. No religion (**Go to Q.58**)
8. Don't know
0. Refused

57. How important is religion in your life? Would you say... **(Read)**

1. Very important
2. Somewhat important
3. Not very important
4. Not important at all
5. Don't know
0. Refused

V. ALCOHOL AND DRUG USE

Finally, I'd like to ask you a few questions about your general health, including your use of tobacco, alcohol and drugs. Please answer honestly and remember that your responses are strictly confidential.

58. How would you describe your general health at present? Would you say you are...(Read)

1. Very healthy
2. Generally healthy
3. Generally unhealthy
4. Very unhealthy
5. Don't know
0. Refused

59. In the past 12 months, how happy or satisfied have you been with your life? Would you say...(Read)

1. Very happy
2. Generally happy
3. Generally unhappy
4. Very unhappy
5. Don't know
0. Refused

60. In the past 12 months, have you ever felt anxious, worried, upset, or depressed? Would you say...(Read)

1. Almost always
2. Most of the time
3. Some of the time
4. Never
5. Don't know
0. Refused

Now, I'm going to ask you a few questions about your alcohol use. Remember that the answers you give me are confidential. When I refer to 1 drink of alcohol, I mean: 1 bottle or glass of beer, 1 glass of wine, or 1 ounce of hard liquor (mixed or unmixed).

61. In the past 12 months, how often have you drank alcohol. Would you say...(Read)

1. Not at all (**Go to Q.64**)
2. Once a month or less
3. 2-3 times a month
4. Once or more a week
5. Once or more a day
6. Don't know (**Go to Q.64**)
0. Refused (**Go to Q.64**)

62. When you drink alcohol, how many drinks do you usually have at any one time? Is it...(Read)

1. Less than one drink
2. 1 drink
3. 2 drinks

4. 3 drinks
5. 4 drinks
6. 5 or more drinks
7. Don't know
0. Refused

63. How many times in the last month have you had 5 or more drinks of alcohol at one time. Would you say...(Read)

1. Not once in the last month.
2. Once in the last month.
3. Twice in the last month.
4. Three times in last month.
5. Four times in the last month.
6. Five or more times in the last month
7. Never had more than 5 drinks at once.
8. Don't now
0. Refused

Now, I would like to know if you have ever used the following substances in the past 12 months. Again, please remember that your answers are strictly confidential. For each substance, tell me if you didn't use it at all, if you used it once a month or less, 2-3 times a month, once or more a week, or once or more a day.

64. Tobacco products:

1. Not at all
2. Once a month or less
3. 2-3 times a month
4. Once or more a week
5. Once or more a day
6. Don't know
0. Refused

65. Marijuana:

1. Not at all
2. Once a month or less
3. 2-3 times a month
4. Once or more a week
5. Once or more a day
6. Don't know
0. Refused

66. Hallucinogenic drugs such as LSD, PCP (angel dust), or magic mushrooms:

1. Not at all
2. Once a month or less
3. 2-3 times a month
4. Once or more a week
5. Once or more a day
6. Don't know
0. Refused

67. Cocaine or crack (base):

1. Not at all
2. Once a month or less
3. 2-3 times a month
4. Once or more a week
5. Once or more a day
6. Don't know
0. Refused

68. Heroin:

1. Not at all
2. Once a month or less
3. 2-3 times a month
4. Once or more a week
5. Once or more a day
6. Don't know
0. Refused

69. Have you used any other drugs to get high in the past 12 months?

1. Yes (**Ask Q.70**)
2. No (**Go to Q.71**)
3. Don't know (**Go to Q.71**)
0. Refused (**Go to Q.71**)

70. What other drugs have you used to get high? (**Record all responses**)

INTERVIEWER:	If respondent answers "Not at all" or "No" to Q.61, Q.65, Q.66, Q.67, Q.68 and Q.69, go to Q.77.
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71. In the past 12 months, how many times have you gotten into difficulties of any kind with your family or friends because of your alcohol or drug use? Would you say...(**Read**)

1. None
2. One time
3. 2-3 times
4. 4-9 times
5. 10 times or more
6. Don't know
0. Refused

72. During the past 12 months, have you ever operated a motor vehicle, boat, or air plane when you felt high from alcohol or drugs?
1. Yes
 2. No
 3. Don't know
 0. Refused
73. During the past 12 months, have you gotten into trouble with the police because of your alcohol or drug use?
1. Yes
 2. No
 3. Don't know
 0. Refused
74. In the past 12 months, have you ever wanted help to stop drinking alcohol or doing drugs?
1. Yes (**Ask Q.75**)
 2. No (**Go to Q.77**)
 3. Don't know (**Go to Q.77**)
 0. Refused (**Go to Q.77**)
75. Have you ever tried to get help to stop drinking alcohol or doing drugs?
1. Yes (**Ask Q.76**)
 2. No (**Go to Q.77**)
 3. Don't know (**Go to Q.77**)
 0. Refused (**Go to Q.77**)
76. Where did you go for help? (**Select all that apply. Read to prompt if necessary.**)
1. Family
 2. Friend
 3. Alcoholics Anonymous or other support group
 4. Social worker, psychologist, or psychiatrist
 5. Minister, Priest, Rabbi
 6. Family doctor
 7. Crisis hotline
 8. AADAC
 9. Other alcohol or drug addiction treatment centre
 10. Other (**Specify**) _____
 11. Don't know
 0. Refused

VI. COMPLETION INFORMATION

77. That ends our survey. In the event that my supervisor wishes to verify this interview, may I please have your first name. (Record last name if offered).

_____ Name

78. Is there another number where you can be reached (e.g. work)? _____

79. We'd like to know whether we reach people from all areas in Alberta. May I please have your postal code?

INTERVIEWER: Thank you very much for your time. Have a good day!

TO BE COMPLETED BY THE INTERVIEWER:

Please record the length of the interview in minutes (_____)

Please enter the sex of the respondent as a verification check

1. Male
2. Female

Please note anything about the respondent or the interview situation that seems important to interpreting the information given.

INTERVIEWER DECLARATION:

I declare that this interview was conducted in accordance with the interviewing and sampling instructions given by the Population Research Laboratory. I agree that the content of all the respondent's responses will be kept confidential.

Enter your interviewer number: _____

APPENDIX 4

Comparison of SOGS-R Items and Comparison of SOGS Scoring and Gambler Labels In the Alberta Studies

TABLE 3
Comparison of SOGS-R Items in the Alberta Adult Studies

SOGS-R 1994 Alberta Adult Gambling Study	SOGS-R 1998 Alberta Adult Gambling Study
BEHAVIORAL ITEMS	BEHAVIORAL ITEMS
1. How often do you go back another day to win back money you lost?	1. How often do you go back another day to win back money you lost?
2. Have you ever claimed to be winning money from these activities when in fact you lost?	2. Have you ever claimed to be winning money from these activities when in fact you lost?
3. Do you ever spend more time or money gambling than you intended?	3. Do you ever spend more time or money gambling than you intended?
4. Have people ever criticized your gambling?	4. Have people ever criticized your gambling?
5. Have you ever felt guilty about the way you gamble or about what happens when you gamble?	5. Have you ever felt guilty about the way you gamble or about what happens when you gamble?
6. Have you ever felt that you would like to stop gambling but didn't think that you could?	6. Have you ever felt that you would like to stop gambling but didn't think that you could?
7. Have you ever hidden betting slips, lottery tickets, gambling money or other signs of gambling from your spouse or partner, children, or other important people in your life?	7. Have you ever hidden betting slips, lottery tickets, gambling money or other signs of gambling from your spouse or partner, children, or other important people in your life?
8. Have you ever argued with people you live with over how you handle money? Have these arguments ever centred on your gambling?	8. Have you ever argued with people you live with over how you handle money? Have these money arguments ever centred on your gambling?
9. Have you ever missed time from work or school due to gambling?	9. Have you ever missed time from work or school due to gambling?
10. Do you feel that you have ever had a problem with betting money or gambling?	10. Do you feel that you have ever had a problem with betting money or gambling?
BORROWING ITEMS	BORROWING ITEMS
11. Have you ever borrowed from someone and not paid them back as a result of your gambling?	11. Have you ever borrowed money from someone and not paid them back as a result of your gambling?
Which of these, if any, have you used to get money for gambling or to pay gambling debts?	Can you tell me which of these, if any, you have ever used to get money for gambling or to pay gambling debts?
12. Have you ever borrowed from household money?	12. Have you ever borrowed from household money to gamble or to pay gambling debts?

SOGS-R 1994 Alberta Adult Gambling Study	SOGS-R 1998 Alberta Adult Gambling Study
13. Have you ever borrowed from your spouse or partner?	13. Have you ever borrowed money from your spouse or partner to gamble or to pay gambling debts?
14. Have you ever borrowed from other relatives or in-laws?	14. Have you ever borrowed money from other relatives or in-laws to gamble or to pay gambling debts?
15. Have you gotten loans from banks, loan companies or credit unions for gambling or to pay gambling debts?	15. Have you ever gotten loans from banks, loan companies or credit unions for gambling or to pay gambling debts?
16. Have you ever made cash withdrawals on credit cards such as VISA or MasterCard to get money to gamble or to pay gambling debts?	16. Have you ever made cash withdrawals on credit cards such as VISA or MasterCard to get money to gamble or to pay gambling debts?
17. Have you ever gotten loans from loan sharks to gamble or to pay gambling debts?	17. Have you ever gotten loans from loan sharks to gamble or to pay gambling debts?
18. Have you ever cashed in stocks, bonds or other securities to finance gambling?	18. Have you ever cashed in stocks, bonds or other securities to gamble or to pay gambling debts?
19. Have you sold personal or family property to gamble or to pay gambling debts?	19. Have you ever sold personal or family property to gamble or to pay gambling debts?
20. Have you ever borrowed money from your chequing account by writing cheques that bounced to get money for gambling or to pay gambling debts?	20. Have you ever borrowed money from your chequing account by writing cheques that bounced to get money for gambling or to pay gambling debts?
21. Have you ever had a credit line with a casino or bookie?	21. Have you ever had a credit line with a casino or bookie?

TABLE 4
Comparison of SOGS Scoring and Gambler Labels
in the Alberta Studies

1994 Alberta Adult Gambling Study	1998 Alberta Adult Gambling Study
Score affirmative responses to all items in Table 3 except for #21 (total=20 items)	Score affirmative responses to all items in Table 3 except for #21 (total=20 items)
SOGS score 0,1 or 2 = non-problem gambler	SOGS score 0,1 or 2 = non-problem gambler
SOGS score 3 or 4 = problem gambler	SOGS score 3 or 4 = problem gambler
SOGS score ≥ 5 = probable pathological gambler	SOGS score ≥ 5 = probable pathological gambler

Note: For SOGS items 1 and 2, the response scale is “never,” “some of the time,” “most of the time,” and “every time.” For all other SOGS items, the response is either “yes” or “no.” In both studies, the scoring for SOGS items 1 and 2 is as follows:

<u>Item 1</u> How often do you go back another day to win back money you lost?	<u>Item 2</u> Have you ever claimed to be winning money from these activities when in fact you lost?
Yes = most of the time or every time	Yes = some of the time, most of the time, or every time
No = never	No = never

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